BRITAIN'S LEADING MAGAZINE DEVOTED TO THE AMSTRAD CPC 464, 664 AND 6128

No. 25 OCTOBER 1987 £1.25

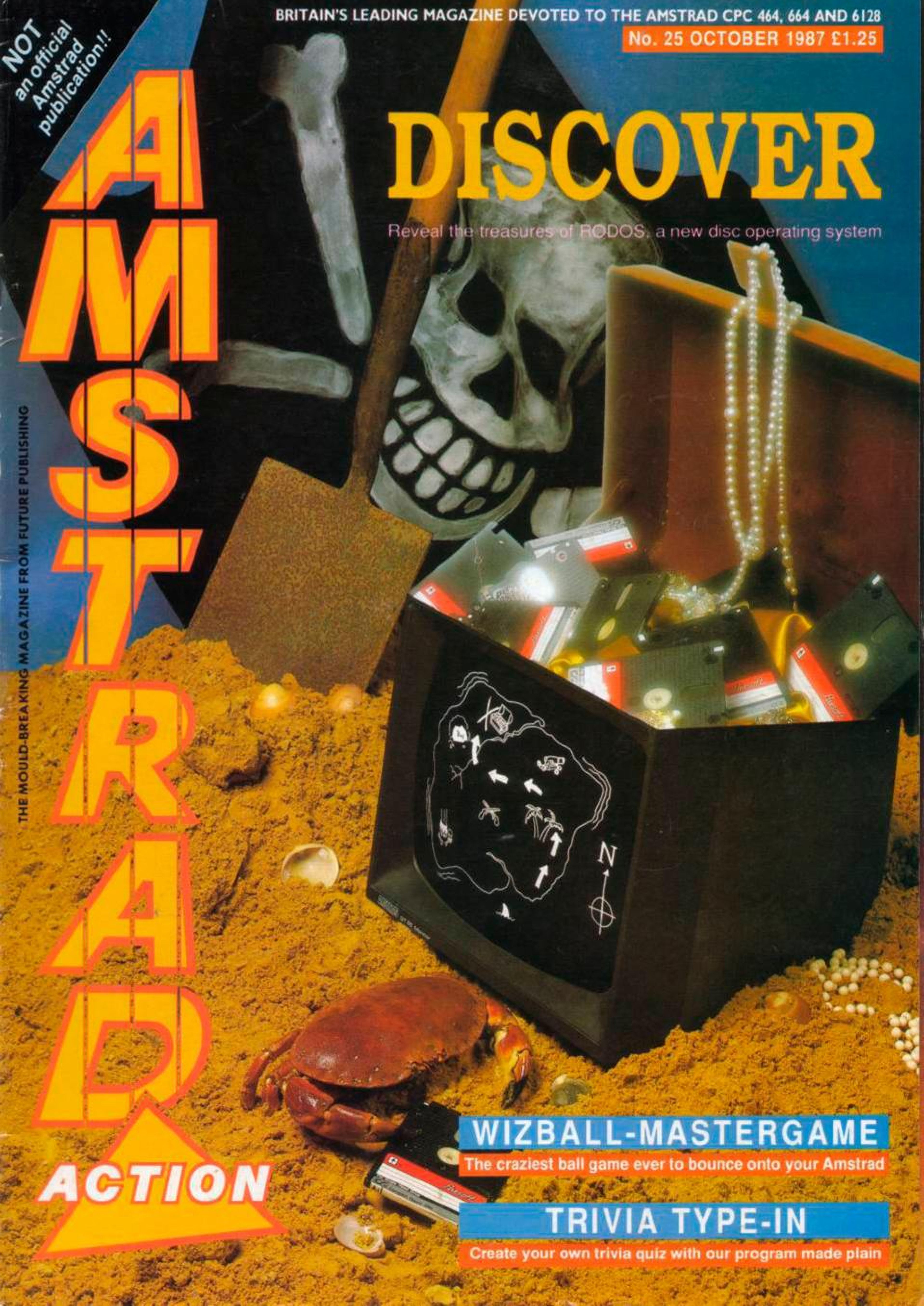
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AMSTRAD ACTION

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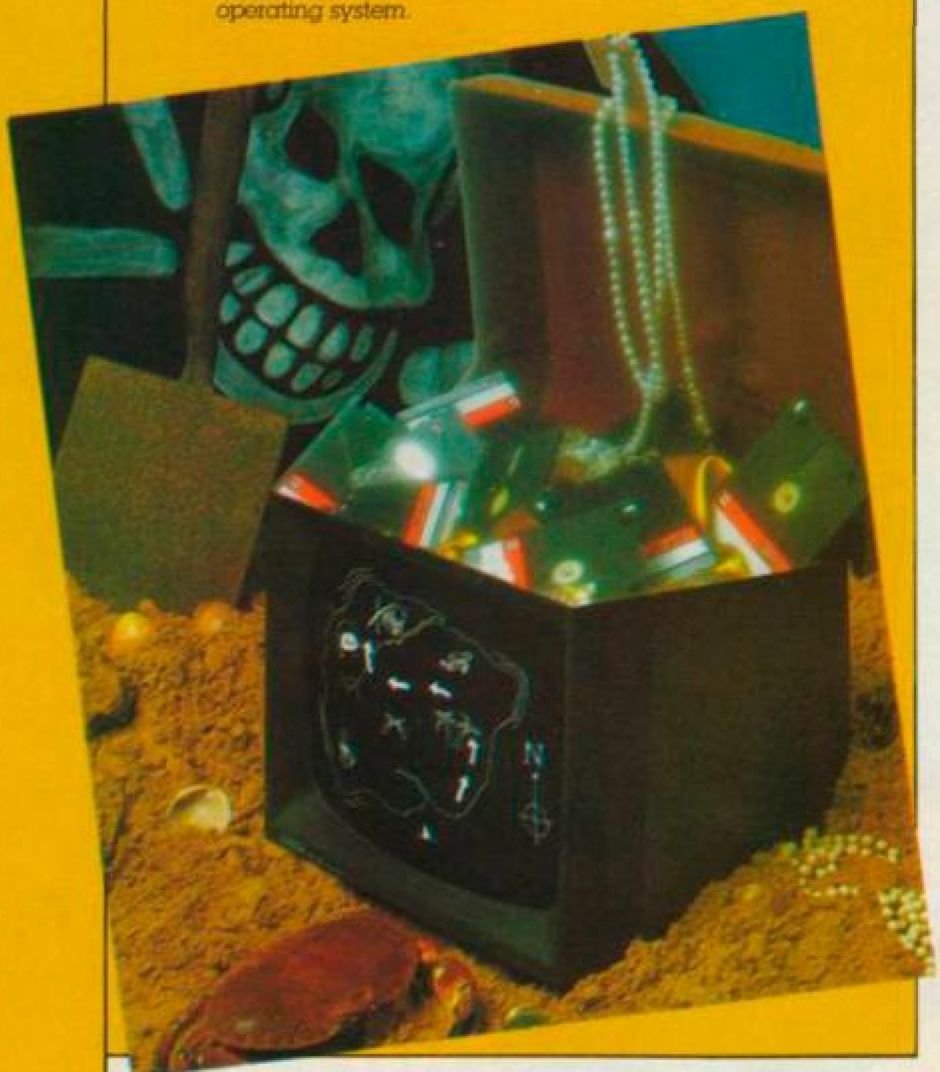
AMSTRAD ACTION OCTOBER 1987

FRONT END

NEWS● LETTERS

SERIOUS SIDE

SOFTWARE● HARDWARE● PROGRAMMING



ACTION & ADVENTURE

GAMES● MAPS● PILGRIM





New Additions

This month there are two important new additions to the AA team. One is called Gary Barrett, who's joined us as a staff writer, and the other is a chap called Mac. More of Mac later, but first let me introduce you to Gary.

Gary is 22 years old and comes from Stoke-on-Trent. This summer he finished doing chemistry at polytechnic and decided he preffered computers instead, et voila, here he is. His interests include role playing games, photography, reading (not his own work) and editor baiting. Gary will be mainly responsible for the games side of the mag, but yours truly will interfere with things as often as possible just to keep him on his toes.

Mac is just four years old and spends all day sitting on my desk humming. I've spent the last three weeks playing with his mouse and cursing him every time something goes wrong. Okay, I admit it, Mac is an Apple Macintosh SE with 20 Megabyte hard disk and he's ushering in a new era of high tech at Future Publishing.

Everything in the mag is now produced using the Mac, it's still written on CPC's though and then transferred, which means both the editorial and art teams have spent a long time getting to know it. This development means changes in typefaces throughout the whole mag, so we hope you like the new look.

Finally a reminder of a couple of important things. Subscriptions and mail order are handled from our Somerton address which you'll find below. If you send address changes, orders, subscriptions or any similar material to the Bath address it will have to be re-routed and will take longer to be attended to. So for prompt attention make sure you use the right address.

Bob

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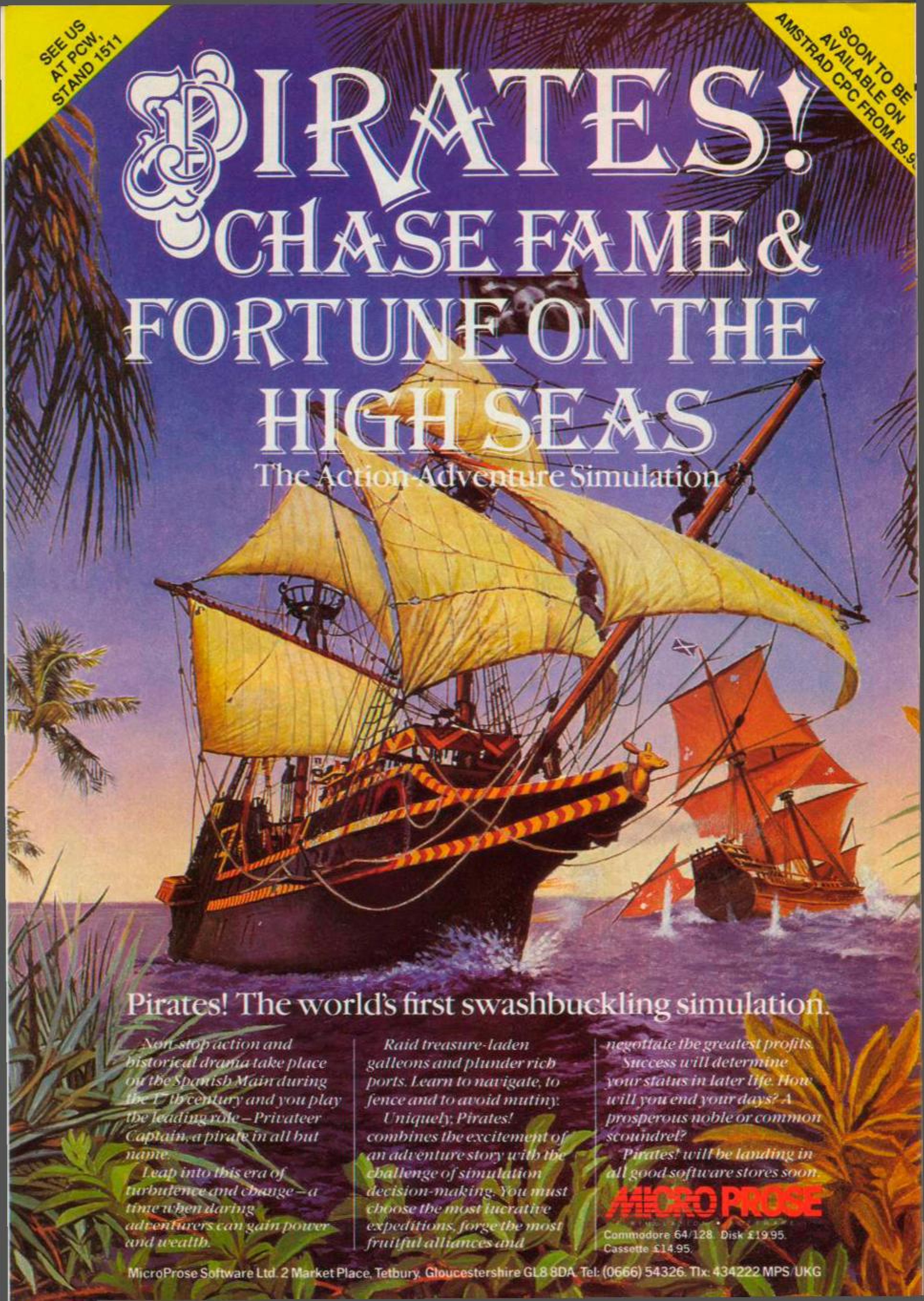
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REACTION

Reaction will have a South London accent to it from this month on instead of a Canadian one. Bob wade has taken over these pages, so you'll be getting it straight from the horses mouth. *(Any more animal jokes and you're fired - ed).*

The address to send your letters to is still : Reaction, Amstrad Action, 4 Queen Street, Bath BA1 1EJ. Remember we can't reply personally to letters, otherwise we wouldn't have time to produce a magazine each month. All mail-order and subscription enquiries or problems should be aimed at our Somerton address listed on Line-up - we just have to pass them on if they come here.

Beautiful Bubble

I would like to commend the software company Bubble Bus. After buying their game, *Classic Muncher*, I entered their high score competition advertised on the inlay card. To my delight I won first prize for the highest score during March. For this Bubble Bus sent me £30 worth of software.

This is the sort of thing that makes buying computer games worthwhile. I shall continue to buy British Games, and keep well away from the likes of Ocean software.

Paul Iddon
Preston, Lancs

We are under the impression that Ocean is British.

Round delivery

Why didn't you review *Paperboy* earlier? It was out in WHSmith on the 20th July.

John Maclennan
Jordanhill, Glasgow

The usual story, I'm afraid. We didn't get a pre-production copy of the game from Elite - just a production copy when it hit the streets, like everyone else. Because of our production schedules this means the review appears about a month after the game has been released. C'est la vie.

Double trouble

As I was looking through *AA* 4 (Christmas 85) I discovered a review of the game *Renegade* from Kuma at £6.95. In *AA* 24 there is an advertisment for the same game, but this time from Imagine at £8.95. Is this the same game? If not, are they allowed to use the same name?

Patrick Weeks
Bruton, Somerset

Go to the Action Test pages to answer your first question. As far as we know, words in common usage can not be held copyright by any company. The only occasion where friction may exist is when company X produces a game that is a blatant rip-off of company Y's. Since this most certainly isn't the case here I doubt whether Kuma would bother to tangle with Ocean/Imagine on anything so trivial.

Joystick fix

The past few *AA*'s have been riddled with questions concerning joysticks that are not compatible with Amstrads and others that complain about joysticks that break to easily. For anyone contemplating buying a stick why not pick the old Atari Joy. It is very strong and sets you back a mere £6.99.

James Brown
Livington, West Lothian

Cover-up

Having just bought issue 24 of your good magazine I noticed on the back cover you have the Imagine advert, *Game Qver*. What's so special about that I hear you ask? Well I have to admit I read another magazine: *C&VG*. On the back cover of the June edition of *C&VG* there is another *Game Over* ad. The lady with the Robot head exposes a good deal more of her breast in *C&VG*'s advert. Gasp! But on your back page she is covered completely. I have studied it closely, and for certain the poster has been altered. Why?

Matthew Hadfield
Sidcup, Kent

There are two possibilities here: either the Mary Whitehouse Brigade have frightened Imagine into doing a cover-up job, or Toot's been using the painting by numbers kit I gave him for his birthday.

Terrific type-ins

I found the brief review of the replies in the recent questionnaire very interesting and was not at all surprised at the popularity of the Type Ins - some are good and some are very good indeed.

In order to encourage even better Type-Ins why not have a prize for the best utility and best graphics program published at the end of the year?

H N Gubby
York

Please, no! The AA offices are getting more and more cramped due to the ever-increasing Type-Ins heap.

Ghoulish past

Did your own RpM write Micropower's *Ghouls*? Way back in *AA* 4's Cheat Mode, there was a poke for the game sent in by RP Marteino from Hendon (hmmm......... another illegible signature?) and in *AA* 7's Cheat Mode was a poke for the *Who Dares Wins* sent in by Richard Monteiro from Hendon "the man who brought you *Ghouls*."

Andrew MacDonald
Eccleshall, Staffs

Richard didn't write the game Ghouls, *but it was his poke, as was the one for* Who Dares Wins. *That was back before he started working for AA, when he used a skull and crossbones as a letter head.*

Split personality

Is it possible to buy two joystick splitters. Plug the first one into the computer (6128) and the second one into the first one? Then put a lightpen in the remaining socket on the first splitter and two joysticks in the second splitter? Hope you understand that. Does *The Pawn* run on a 464 with disk drive and 64K memory upgrade? Which Amstrad does Bob Wade have? Please answer my questions.

Brandon Mason
Surbiton, Surrey

1. Don't know. Can anyone else help?
2. No
3. I own a 464 with colour monitor.

CB on the air

Who is CB who reviewed many of the games in *AA* 23.? He is certainly not listed as an *AA* ed. Is CB a pseudonym for BW?

Karl Coldman
London

Chris Boothman, the owner of the mysterious initials, is our freelance games reviewer. He pops into the office to pick up, or drop off, games and generally annoy the rest of the AA staff. If you pick up issue 17 and flick to Ed-Lines, you'll get some info on this effervescent character. Incidentally he now gets his rightful credit on the Line-up pages as a contributor.



"THOSE ADVENTURE GAMES GET MORE SCARY ALL THE TIME..."

Drunk - not us

In issue 24 were the answers to the Arkham Manor competition. You said that Lord Nagel was a teetotaller, but the second glass of whisky wasn't drunk. So there!

Richard Smithies
Purleigh, Essex

Okay, so we said it was a "full" glass of whisky, which might mislead one into thinking the murderer wouldn't touch it. I think you were being a little too clever though because the presence of the second glass was purely meant
er did drink.

Suggestion box

Suggestion - print a list of those games you have reviewed and ask readers to review (in *AA* style) any games which have slipped throught the net of Bob and company, and print the best review of a game reviewed by two or more people.

Suggestion - a game hacking course to help people like me to learn how to poke games.

Richard Pratt
Ramsgate, Kent

Tell the truth

I wish someone could tell me the accurate truth about which home computer has sold the most machines and thereby has the most software and hardware support, assuming this follows. I feel the AmSpec+3 will have the same support and longevity of all Spectrums and therefore be a better buy than a 6128 which doesn't seem to have the same level of support or even the cheap software. And now the Atari's will be £299 with disk, mouse and monitor. Or even the 8256 has sold so many units that maybe that will be the most supported.

What would your advice be? All I want is a machine which will be better supported than the others. This I feel is reasonable as there must be a machine that has been the winner in this race. Is it a spectrum or an Amstrad? Surely there is a Ford Cortina of the computer world.

P J Morley
Whittlesey, Cambs

In terms of pure quantity it would have to be the Spectrum. However, I think you're missing an important point here, it's not just quantity that matters but quality. In terms of quality the 6128 has superior graphic and sound capabilities to that of the Spectrum, and the same can be said of the Atari ST. Don't be railroaded into buying a computer just because you think it's the best-selling brand. Buy it because it fulfils your needs.

Games on the brain

One Knightyme, under the Red Moon, I had a Highway Encounter with an Elite group of Harvey Headbangers. They threw down their Gauntlet and shouted "Get Dexter", after which I made a quick Boulderdash and Bounder over some Heartland, through an SAS Assault Course, just like how the Army Moves, over a Bridge and into West Bank, where a Grange Hill Paperboy delivers.

They were soon in a Trivial Pursuit, I was no Speed King and had little Thrust and they soon caught me. The Leader of the gang, who looked Boad, was no other than that Kung Fu Master and Barbarian, Bombjack, with his son and Apprentice, Jack The Nipper. He wore a Green Beret, Pyjamaramas and had Thing on a Spring around his neck. I was Spellbound and Bombscared out of my Living Daylights as his Little Computer People circled me. "We come for Brian Cloughs Football" they chanted. "But I haven't got that A.C.E Football Managers ball. I lent it to Mastertronic's Five a Side so they could Powerplay some Super Soccer and become Footballer of the Year".

"That's Impossaball. Werner very long ago?" Bombjack demanded.

"On Matchday" I replied

"Well, that was very stupid. I will have to try my International Karate on you." He prepared for a kick and screamed, "Yie Ar Kung Fu".

But just at that moment, that Trashman, Roland appeared, his career was last seen On the Ropes. He saw I was in a Kat Trap and that I couldn't Break Thru, but knowing this my Split Personality Thrust a Lightforce punch to the hooligans head. It was no use, Bombjack had a face like a Kettle and just laughed. So Roland screamed "Who Dares Wins" and set off on the seemingly Impossible Mission to rescue me. Where Dan Dare not, Roland will.

My heart was in a real Pulsator as he STORMed into The Little Computer People and sent them Spindizzy to the ground. There were only the two jacks left now and they were Spellbound, so Rolamd put them on the Last V8 and sent them Into Oblivion.

Arnold & Andrew Rooke
Grimsby, South Humberside

What can I say? What a load of Hyberbowls.



Double trouble

After reading your magazine no. 23 (August 87) for the fifth time over (still interesting), I was looking through your Helpline column. And to my amazement! thought for a moment I was seeing double. Yes, seeing double. There half way down the first column, the 11th name down, I saw a Helper called Alastair Scott. Offering help on chess programs, *Tasword* 6128, *Toolkit* (Beebugsoft) etc etc. etc.. The problem I saw double, and still am seeing double is: when I reached the top of the next column and there again saw someone offering help on yes, Chess programs, *Tasword* 6128, *Toolkit* etc. etc. It was another Alastair Scott, but this time the address was diferent? Is this the same Alastair Scott? Or is his twin offering the same help from another address?

Ranjit Singh
Huddersfield

We hadn't noticed this before and aren't too sure whether it's coincidence or not. Are there two Alastair Scotts playing chess with each other in Scotland - or did you move and forget to tell us to take out your old Helpline entry?

Memory full

On 30th April I bought a cassette of *They Stole a Million* and for almost three months I have been trying to load it. The inlay indicates that it is for, among others, Amstrad 6128, which is what I have, but évery loading fails with the message "Memory full in 210".

I have written to both Amstrad and Ariolasoft. The former eventually sent a listing which has had no effect, while the latter have not replied. Can you tell me why the memory is full on a 6128 when the cassette has been running for only a short time and can you help me to load the program? I do not think this is an individual query because another cassette loading into another 6128 produced the same result.

George M Young
Glasgow

This sounds like a compatibility problem and the only people who could help you are Ariolasoft. Return the tape to them and they ought to replace it with a working 6128 version.

Hooked on data

However strange the next sentence sounds I can assure you that I am of sound mind. I would like more data programs. Yes, I would like more programs with data statements in, more long lines of hexadecimal numbers that are quite fiddley to type in.

The reason why? I just love 'em. They are easy to type in compared to lines of BASIC and require a lot less thought. In fact, I can claim to sing while I am typing out long lists of data.

You may wonder where, why, when, how etc it happened. Well it was Saturday 18th July and i was bored. Having not broken up yet I decided to type in that *Sound Digitizer* program in December's issue of *AA* (15). I had typed it in before but the long lists of data weren't as appetising as they are now. When I started I put on my 5 Star Album (Silk and Steel, it is fantastic, I recommend it), and typed away on my keyboard as happy as Happy himself. And while I typed out those once hideously long data lines, Deniece and the others sang out those fantastic tunes that deserve all the awards they won for them and even if I may say so myself I joined in and sang too. What bliss!

However, to my dismay those once hideously long data lines came to an end and I was forced to quit my 5 Star while I saved the program and checked to see if it were ok. Well, I only made one mistake and that was a mix up with an E and a F (F for Five Star).

So please, please, please (I will almost worship you forever), please print more data programs.

Stephen Parkinson
London N16

Vorsprung durch vortex

Having owned a Vortex Ram Expansion since February 1986 I know that it is an excellent product with great potential. However there have been a number of problems when using the board with other hardware add-ons and with some commercial software. By far the biggest problem that I have found is understanding exactly how to make best use of the boards many features and commands.

I know that I am not alone in wanting to make more use of the Vortex Expansion and that there are another 600 or so Vortex owners in the UK, and a similar number abroad. If you are a frustrated expansionist then I suggest that we get in touch and form a self-help group. If you have modified commercial programs to run under BOS, experienced or preferably solved a hardware or software problem, or perhaps written a 200k program, please write.

Hopefully programs problems and hints could be written up as a newletter for the benefit of all users or perhaps in a magazine column!

In case you had not heard Vortex have brought out BOS version 2.1 which apparently incorporates many improvements - mini is on order now. Interested in the details? Please write with your thoughts on a user group and please enclose a Stamped Addressed Envelope!

For 18p we can start to make use of all that extra memory.

Chris Peel
30 Dale View Road
Keighley
W Yorks
BD21 4YR



Celtic thunder

My first point concerns your Helpline. Since I got my name in I have had one letter and numerous phone calls. The calls I can handle, but the letter presented a wee snag. You stress that people should include a S.A.E. The girl who wrote to me was kind enough to do so but because I live in Co. Dublin in Ireland, an English stamp is of no use to me. Please could you print this so that future people won't encounter this problem.

I have another gripe. This concerns a game I purchased form Artic Computing Ltd.The game is called *International Rugby* and to my mind it is a reasonably good game. I usually play on the Irish team and after about 45 mins hard slogging I sit back to enjoy the rendition of the winning sides (mine) national Anthem. Expecting to hear Amhran na Bhjian, you can imagine my shock when out comes in glorious sound "God save our gracious Queen". This happens each time Ireland wins. I think that this is a terrible error for such a good game.

Roger Murphy
Co. Dublin
Ireland

Mail-order blues

What's happened to your mail-order dept: ip to issue 21 we had over 90 games plus a dozen or so serious software and now we only have a choice of 2 or 3 games plus a load of accessories. Any hope of getting back to normal?

Mr J Love
Bellshill, Lanarkshire

Unfortunately our mail order department just couldn't cope with the old system. Therefore it was decided to restrict it to a few products each month which we condidered to be really worth endorsing.

Not worth the bother

What happened to you. You have changed everything about your magazine. As soon as Amtix gave up the ghost you upped your price to £1.25 - and for what? Excuse me for a second or two while I count your reviews of games excluding the Pilgrim let's see 20 games on your Action Test in September's Issue. Excuse me while I count the reviews of the back issue. The very first issue you reviewed 130 games or so.

To be perfectly honest, in my opinion I don't think your magazine is worth the bother and money. I prefer the magazine *Computing with the Amstrad.* Why don't you bring back some of the old features like the Hi-score and the Voice of the People. Instead of showing your view of a green screen, show us a photo of one.

Campbell Illilzon
Renfrewshire
Scotland

Well I can see your not happy, so I'll tackle your points in order. The price increase wasn't due to Amtix's closure, the timing was coincidental. The rise was due to increased costs since AA was launched. For what? Well judging from our questionnaire response it's mainly Type-Ins, Cheat Mode, Action Test and Serious Software - perhaps you aren't interested in them?

As for reviewing 130 games each issue, there just aren't that many produced each month. The first issue was a one-off look back at all the software that had been released by that time.

Voice of the People just didn't get enough response to fill a page every month and we therefore considered the space much better devoted to something else. Hi-score was an administrative nightmare, and also a big space consumer. I still consider the First Day Target scores a more valuable reckoner because it gives everyone something to aim for rather than just a small elite who are excellent games players.

Slanging rhyme

SOFTWARE WINNER

I sent for SENTINEL through the mail.
On April tenth I sent my money,
But nothing came, I thought "That's funny"
The advert said "three working days".
This speed of service would amaze.
The days went by, and still no disk,
Perhaps you had my order missed.

The cheque was cashed, the money paid,
No program came. My plans were laid,
To phone you up and ask the reason,
Was SENTINEL now out of season?
The girl was kind and took my name,
It wasn't her that I could blame,
Three weeks had passed since first I wrote,
But nothing came, no disk , no note.
And then, "Hooray!" one day in May
The postman called, and just to say
The disk was here, the game I played
And by the SENTINEL I was slayed!
It may have been my story's end,
But then, so soon, my postman friend
Bought me a parcel, crisp and new,
And in it SENTINEL number two!

A phone call to the Barn did yield
An envelope, in which I sealed
The second copy of the game,
My faith in A.A. not the same.
The mag. is good. Mail Order's not.
For in your book there's now a blot.
With worry, anger Im now thinner?
What compensation? - Software Winner?!??

Mr Gareth Heward
St. Sampson's
Guernsey

Absolutely!

Multi-load fan

I feel I must write to point out the excellence of the curent multi-load games coming into the market. Firstly the whole point of multi-loads is to give the user excellent graphics, sound and playability. One such game on the C-64 is *The Last Ninja* which is proving to be a massive success and no wonder as it contains 360k of programming (60k each load). This is one game which is well worth £10.

This must be the future for all the 8-bit micros as they are matching the amount of K of the ST and Amiga. Also Software Projects must let other companies in on their multi-load system - the next part of the game loads while you're playing the first section. This would eventually bring much better grahics etc into the Amstrad market.

Your covers are so pathetic. Please get an artist to draw the master game or do screen shots on the cover, other magazines do.

Mark Thacker
Leicester

As we've always maintained, we are a very independent publication, not likely to do something just because every other magazine does. We try to do what our readers want us to, and currently feeling seems to be running in favour of the covers the way they are.

Single sided disks

Disk's again, but no prices. Why do I never get a backup copy on the B side? I am forced to buy copying utilities as nobody runs a master, it can only encourage privacy.

Chris Todd
Farnsfield
Notts

Unfortunately software houses don't tend to provide facilities for backing up games from cassette or disk. If they were to provide built-in tape to disk transfer and disk back-up routines (usable only once or twice per copy of course - that's for the programmers to work out) then there would be no justification for back-up devices at all. Until then I think the Multiface II, Imager and company will continue to flourish.

Frustrated designer

Some of us CPC owners, or maybe just me, are not great programmers. But we do have some great ideas for games of one sort or another. The problem is once we have got these ideas what do we do with them? Who do we get in touch with? And one big question: How, if it does get off the ground, do we know we are not getting a raw deal? Also should I copyright my ideas? If I have to write to anyone please could you send me an address to contact. It would please me a lot if you could answer the questions as I feel that many ideas are never heard about.

Matthew Dewsbury
Norwich
Norfolk

Ideas have always been difficult to copyright, a chnage here or there and someone could easily come up with a similar game that didn't break the copyright laws. While software houses are currently obsessed with Coin-Ops, TV characters and licences, original game designers are also likely to have a lean time. Without programming knowledge you don't stand too much chance.

However software houses, particularly the smaller, independent ones, are always prepared to look at ideas. So if you set out your game design clearly, with details on the graphics, controls, levels, etc, someone might take it on if they think it's good enough. All you can do is try.

Market mania

Can you recommend a share portfolio management package for the Amstrad CPC6128? My husband says that it should be perfectly possible to get some spreadsheet software to do this. I want to plot the progress of my shares by graphs if possible and calculate the current value of my portfolio without having to resort to the use of my calculator and overwriting previous notes. Mind you, after this disastrous week I don't think I want to know any more!

Mrs L C Cole
St Albans, Herts

Matrix from Audiogenic Software (0734 30 3663) is your best bet for a spreadsheet with graphics option. For £34.95 on disk it is exceptional value. For full details look at page 33 of the March AA. We don't know of a share management package. Any one know of one?

Not a write-off

I have been reading *Amstrad Action* for just under a year. I enjoy it very much. However, one thing that I have noticed is the fear in the back of peoples minds about the CPC464,s being written off. I have written this letter to ease their minds. I owned a 664 and was angry when Alan Sugar stopped their production. However, I kept the 664, even though there were rumours about a lack of software. However, all software produced, with some exceptions, (*Art Studio, Alligatas Meltdown*) is usually compatible across the whole range. This meant that even though the 644 had caused production, it was still in reality alive and kicking.

Perhaps if Alan Sugar was to axe the 464, and I personally doubt this, the software would still be available. I say perhaps because then only disks may be produced, but disk drives are becoming cheaper. I sold my 664 and now own a 464 and disc drive (I'm an Infocom fan), and am not worried by the threat of the cease of 464's, for it seems very far off.

R D Smith
Weedon
Aylesbury

I'd agree wholeheartedly with you on that one Mr Smith. There currently seems no reason for Alan Sugar to drop the CPC's, which are his first and perhaps best loved computer. And even if such an event were to happen, the tens of thousands of CPC owners and our good selves would not disappear overnight, but continue to provide a thriving marketplace for a long time to come.

Fond of dongle

I am writing about software piracy and solutions to it. In the past several good ideas never really worked. There was a coding attempt on games like *Manic Miner* and *Jet Set Willy*. These did not stop you copying the tapes but meant that a code sheet (obtainable only with an original copy) had to be used to type in a code to get the game working. This had two drawbacks: it was a hassle for the genuine owner to type in the code, and it did not take too long to copy out the sheet. So this idea faded.

Then there was Lenslok: a lens that unscrambled a mass of pixels on the screen to represent two letters that must be typed in. This was okay if you had good eyesight, but again hassle for the genuine owner, and the letters were not always very readable.

One of the best devices I have seen is the dongle. This is a little black box that plugs into the side of the computer. The game will not load unless the device is present. I think this idea is wonderful and would stop pirating; I cannot see why it is not used.

The other way of preventing piracy is to reduce software prices. In the good old days of the ZX81 you could buy 10 games for a fiver. That's value! I think if software was reduced to a maximum of £5 a lot more copies would be sold than at present (look how Mastertronic is doing).

Roger Payne
Alcester, Warwickshire

Penpals, please

■ **Darko Bulat, Dujšinova 3, Zagreb, Yugoslavia 41000** ☎ (+41) 53 1964 – wants help in hacking, machine-code. Has pokes for games, uses 6128 with colour, Pace RS232 and *Commstar*. Looking for friends with computers

■ **Mark Callaghan, 19 Dalum Drive, Loanhead, Midlothian, EH20 9LW** – is 14 and wants a penpal who knows how to get Thor's hammer in *Spellbound*

■ **T Crookston, 74 Stanley St, Accrington, Lancs, BB5 6PQ** ☎ (0254) 87 1677 – age 25, has 6128, interested in programming, games, utilities and swapping ideas

■ **James Clarke, Home Farm, Onslow, Bicton Heath, Shrewsbury, SY3 5EE** – age 11, has 6128, wants help with graphics

■ **Grebor McBride, 17 Turleam Rd, Crieff, Perthshire, PH7 3QF** – 15: 464: games + tips

■ **Cameron Parsonson, 67 Beatty St, Christchurch 7, New Zealand** – "would like to meet some CPC lovers from England"

■ **Darren Meharg, 35 Tittesworth Est, Blackshaw Moor, nr Leek, Staffs, ST13 8TS** – has 464 and 95 games; age 14

■ **Magnus Gundersen, Smoelav 4, 4029 Stavanger, Norway** – age 15, has 6128, interested in machine-code, Basic, games and utilities

■ **Rowan O'Donoghue, 2 St John's Villas, Waterford, Ireland** – is 14 with 464, wants penpals in Ireland. Interested in arcade games, sports simulations, simulations, adventures

■ **Jennifer Williams, 39 Manchester Rd, Audenshaw, M34 5PZ** – age 15, thinks *AA* is brilliant

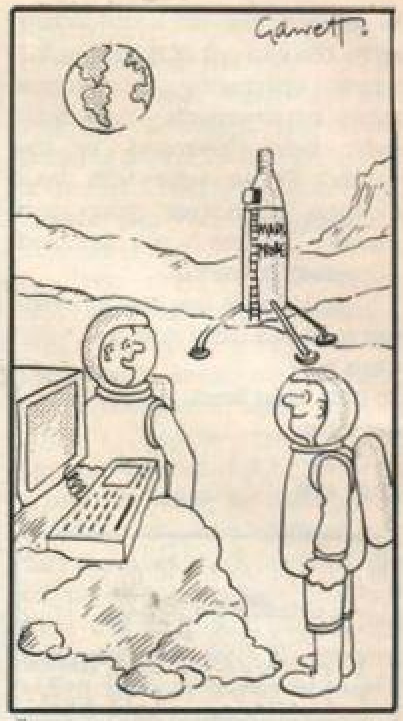
■ **Wayne Goh, 111 Saxon Drive, West Acton, London, W3 0NY** ☎ 01-993 6851

■ **Stephen Evans, Dyffryn, Gwyoogrug, Pencader, Carmarthen, Dyfed, SA39 9AX** – "Here are my dodahs: age 15 and own 464, interested in programming and games."

■ **Derrick Corrigan, 19 Floraville, Enniskillen, Co Fermanagh, N Ireland, BT74 6OA** – age 16 with 464 and disk, enjoys adventures and arcades, *GACing*. "If you don't print this I will go out and buy this month's *Amtix* – and I don't make idle threats!"

■ **Stephen Chandler, 22A Normans Rd, Canvey Island, Essex, SS8 7SN** – age 16, has 6128, wants to swap ideas and tips, likes arcades and simulations

■ **Brian Frayne, 42 New Rd, Trebanos, Swansea, SA8 4DL** – wants a French penpal aged 14-17



"SO THERE IS CIVILISATION HERE AFTER ALL..."

In the future...

I have spotted an error in *AA* 22. Cheat Mode said Owen Cunningham, a runner-up for the prize, had poked *Project Future*. It was nowhere to be seen. Being an owner of the game in question I was extremely annoyed. Hhrrrmmm, clearing of throat.

I produce a magazine called *464 Club*. Enquiries and subscriptions welcome. Your mag despite the clearing of throats is enough to conk you out with its brilliance. Although I never did thy the now-defunct *Amtix* I bet it was probably stupid.

Your male 9-year-old reader,

Jocelyn Armstrong
77 Fairyhill
Killarney Road
Bray, Co. Wicklow, Eire

Sorry about our past error. Look for this poke sometime in the future.

Barbary coasts

After reading your review of *Barbarian* (*AA* 23) I ran out tenner in hand and bought it, got home and loaded it by 5 o'clock. By 6:51 I had beaten eight fighters and the wizard, and the girl was standing beside me.

Is this a record? Is there not any more to the game? This is not much value for money. Or am I loading it wrong?

After all my moaning the game is still worth buying just to watch the demo.

Scott Barbary
Redruth, Cornwall

We believe you; you're a hero! You wanna medal or your head chopped off? (RpM brags that by 6:51 he had a poke.)

Helpline

Where eager Amstrad experts volunteer aid to fellow readers having problems

If you too feel helpful, just send us your name, address, phone number (say so if you don't want it to be printed) and subject on which you want to help. Please write on a postcard or the back of a stuck-down envelope to simplify administration here in the office. Send to: **Helpline, Amstrad Action, 4 Queen Street, Bath, BA1 1EJ.** If you are asking for help, make direct contact with the appropriate Helpliner - don't pester your usually-patient (but pressed) editor. By post, you must include a self-addressed, stamped envelope for the reply - otherwise you won't get one. And if you telephone, stick to socially acceptable hours!

The Helpline has grown so large that from next month it will be split into two chunks, printed on alternate months. So if yours isn't in this issue then watch out for it next time. It you wish to withdraw from the Helpline you should contact us in writing, otherwise you'll stay in.

Gauntlet, Aliens, Hacker I, Green Beret, Short Circuit, Lightforce, Knight Tyme, Zub, Xor, Bomb Jack I, Apprentice, Thrust, Starstrike 3D, Boxing (Amsoft), Knight Ore, Oh Mummy. Good at programs that give lists of things eg telephone numbers, games, stocks - 464
Abdul ("Billy") Qureshi, 16 Truggers, Handcross, Haywards Heath, W Sussex, RH17 6DQ = (0444) 40 0548

Amaurote, Kane, Hyperbowl, Turbo Esprit, Speed King, Starstrike II, Yie Ar Kung Fu, Thrust I, Tomahawk, Druid, Batman, Knight Tyme, Thanatos, Harvey Headbanger
Jason Burns, 212 Victoria Rd, Higher St Budeaux, Plymouth, PL5 2DH

Basic, machine-code, hardware, programming roms. Peripherals available for use: printers, video digitisers, rom blowers, Multifaces
Mark Spencer, SIG Enterprises, room 2, 101 Oxspring Bank, Sheffield, S5 8NR = (0742) 31 4053

Protext, Prospell, Utopia roms, Basic, DMP 2000 printer; can supply screendumps of games or programs
Andrew Perry, 5 Uplowman Road, Tiverton, Devon, EX16 4LU = (0884) 25 3414

Mini Office 2, Melbourne Draw, Music System, tape-to-tape, DMP 2000, Grand Prix Simulator, Chronos, Starglider, Yie Ar Kung Fu, Colony, Destructo, Radzone, Kane, Dynamite Dan, Rocky Horror Show - and many other games, software companies' addresses and general help on the 464
Helen Saunders, 14 Elm Ave, Beeston, Nottingham, NG90 1BU

any problems or tips (founded German Computer Service two years ago) including CPM, transferring programs from other computers, hacking, making programs compatible over all CPCs, pokes, Basic errors and problems, Hacker I, Cauldron I and 2, Theatre Europe, Bruce Lee, Thanatos
Kai Herthneck, Ostracherstr. 4, 7000 Stuttgart 80, W Germany = (+711) 72 3357

Feud, Jack the Nipper, Knight Tyme, Message from Andromeda, Revolution, Street Hawk, Saboteur, Starstrike II, Thrust II, 180
Paul Selvidge, 15 Whitcombe Close, Lordswood, Chatham, Kent, ME5 8RL = (0634) 62978 except Sundays

Batman, Druid (use map locations from AA mags), Head over Heels, Batman, Druid, Rally II, Green Beret, DT's Decathlon, Lightforce, Yie Ar Kung Fu, Who Dares Wins II, Bruce Lee, Ghosts'n Goblins, Chuckie Egg, Chronos, Moon Cresta, Mindshadow
Darren Roafe, Lyndhurst, Station Road, Middle Drove, Wisbech, Cambridgeshire, PE13 8SP = (0945 73) 276

pokes, tips, maps, debugging, Basic programming, will type in listings
Mark Hillier, 121 Eliot Bank, Forest Hill, London, SE23 8XD = 01-291 6390

Laser Basic
Trevor Prince, 46 Hillport Ave, Porthill, Newcastle, Staffs, ST5 8JZ

Knight Tyme, Spellbound, Pipeline 2, Harvey Headbanger, Alien Highway 2, The Apprentice, International Rugby, Raid, Mutant Monty, Donkey Kong, Sweevo's World, American Football, Jet-boot Jack, Blagger
Roger Murphy, 6 Glenageary Woods, Glenageary, Co Dublin = (0001) 80 6858

Mini-Office II
Craig Paterson, Orchard Mews, Village Road, Gt Barrow, Chester, CH3 7JH = (0829) 40787

adventure programming
Simon Forrester (age 13), 15 Halcroft Rise, Wigston Magna, Leicester, LE8 2HS

hints, pokes, tips on RebelStar, Back to Reality, Apprentice, Knight Tyme, Spellbound, Finders Keepers, Equinox, Get Dexter, Zorro, Sacred Armour of Antiriad, Sorcery Plus, Sentinel, Deactivators (to level 4), Aliens, Tau Ceti, Starstrike II, Nexus, Mercenary
Steve McClay, 32 Lycett Rd, Wallasey, Merseyside, L44 2DA

Basic programming and guidance on routines
Stephen McCormick, 27 Coshneuk Road, Millerston, Glasgow, G33 6JH

writing programs, machine-code, solving problems, GAC and mapping adventures, testing adventures and other forms of program, teaching programming, graphics, sound - and almost anything else
IR Murphy (aka Smurf the Warlock), 25 Craven St, Accrington, Lancashire, BB5 0SE

Art Studio, Mini Office 2, DMP 2000, CPC 6128
David Marek, 2 Camus Road West, Edinburgh, EH10 6RB

programming in Basic and machine-code, Knight Tyme
Phil Stockdale, Thorndale, 18 Shire Rd, S Ferriby, S Humberside, DN18 6JG = (0652) 34363

chess programs, Tasword 6128, Print Master, Toolkit (Beebugsoft), Advanced Art Studio, Mini-Office II, Advanced Music System, disk utilities (and writing them yourself), RSXs and firmware calls
Alastair Scott, 30 Talbot St, Grangemouth, Stirlingshire, FK3 8HU

programming in Basic and machine-code - 464
Michael Ewan, Hall Bank, New Hutton, Kendal, Cumbria, LA8 0AU

Adventure writing - GAC, Quill etc. Also play-testing and evaluation, program listings etc. Anything at all to do with writing adventures
Pat Winstanley, 13 Hollington Way, Wigan, WN3 6LS

Batman, Ikari Warriors, Jack the Nipper, Rambo
Si Carter, 6 Laurel Grove, Hoole, Chester, CH2 3HU

Message from Andromeda, Terra Cognita, Thrust, Mr Freeze, Spellbound
Darren Jackson, 85 Fitzherbert St, Warrington, Cheshire, WA2 7PN

Using and programming CPM, Basic, graphics, programming adventure games, data or program security methods - 6128
Cormac McGaughey, 1 Glenariff Rd, Cushendall, Co Antrim, BT44 0QY

Basic, Forth, assembler, firmware, graphics, digital electronics - 664
Tim Mo, 180 Brookland Terrace, New York, North Shields, Tyne and Wear, NE29 8EP

all CPC chess programs, Tasword 6128, DMP 2000, Printmaster, Printer Pac II, Beebugsoft Toolkit, programming with RSX commands
Alastair Scott, Mylne's Court, Lawnmarket, Edinburgh, EH1 2PF

tape-to-disk transfer, infinite lives, maps, adventure solutions, French games, Amstrad program guide
Phil Maxfield, 40 the Brow, Brecks, Rotherham, S Yorks, S65 3HP = (0709) 54 5055

Basic programming (mainly utilities but some games)
Mark Bonshor, 4 Stoop Lane, Quorn, nr Loughborough, Leics, LE12 8BU

Basic programming, useful calls and pokes, hacking, tape-to-disk, Melbourne Draw, supersprites, repairing joysticks, tape loading, Basic scrolling messages, sprites in border, ripping out title pages, music and effects from games
Carl Harker, 38 Lyndon Ave, Blackfen, Sidcup, Kent, DA15 8RJ

Basic, Logo, Laser Basic, CPM, Fig-Forth, simple machine-code, GAC, disk or tape loading, tape-to-disk
Edward Reid, 157 Ladyloan Ave, Drumchapel, Glasgow, G15 8RX

bridge clubs - scoring on Mitchells, aggregate and Howells, name and address lists, library books, master points (calculation and certificates) - all CPCs using CPM for Masterfile and Superscript
FB Brighton, 30 Ranmoor View, 410 Fulwood Rd, Sheffield, S10 3GG = (0742) 30 7555

Basic programming, printing problems (on DMP 2000), loads of games, pokes, maps, type-ins, machine-code
Guy Sanders, 270 Willesden Lane, London, NW2

any aspect of writing a fanzine
Richard Hannah, 48 James St, Helensburgh, Strathclyde, G84 8XG = (0436) 3310

Basic, sound, graphics (animation and collision detection), interrupts, tape and disk filing, printer commands, Protext (will print listings for 35p + 3p page + sae, screen dumps for 75p + sae, phone for details) - 464
Gavin Manning, 20 Windsor Rd, Wanstead, London, E11 3QU = 01-989 8843

C&G 747, HNC Computer Studies, serious users
John Wharram, 61 Silver Crescent, Chiswick, London, W4 5SF

machine-code, CPM, hacking - 6128
Tony Hoyle, 11 Dorset Rd, St Annes, Lancs, FY8 2ED = (0253) 72 7368

Basic, machine-code, especially graphics - 464
PJ Higginson, 194 Turton Rd, Bradshaw, Bolton, Lancs, BL2 3EE = (0204) 58907

Basic, some machine-code (will print listings for 50p + 5p page +sae) - 6128
Andrew Smith, 5 Station Rd, Foggathorpe, nr Selby, N Yorks, YO8 7PU = (0757 85) 540

Basic, simple machine-code
Duncan Ellis, 6 Clifton Terrace, Ilkley, W Yorks, LS29 8ED

Laser games, assemblers, firmware
Martin Packer, 393 Whitton Ave East, Greenford, Midx, UB6 0JU = 01-935 6600 x4283 or 01-423 3452

Spellbound, Exolon, Dragon's Lair
Scott Miller, 7 Inverness St, Drumoyne, Glasgow, G51 4EW

CPM, Star, DMP 2000, Cobol, Nevada Cobol, Turbo Pascal, Locomotive Basic, colours from Basic, disk to tape, disk to disk, Tasprint, databases - 464
Allen Reavie, 22 Mourneview St, Portadown, N. Ireland, BT62 3AW

machine-code programming
Jim Tripp, 24 Orchid Close, Taunton, Somerset =

machine-code, Basic, Logo, CPM, graphics, sound, most CPC games
PJ Cook, Prestel 011 110 750

tape loading, using CPM, Minerva database, Tasword, Taspell 6128, Art Studio, Tascopy, Multiface 2, WordStar, AMX Pagemaker, Planit, Discovery Plus
Mr R Cope, 171 Honiton Road, Exeter, EX1 3EP

programming (Basic, some machine-code)
Jeffrey Hunt, 2 Deweys Way, Gillingham, Dorset, SP8 4BW

AMSCENE

Monthly update on what's new on the CPC scene

Charity compilation

It's the end of the summer lull and software houses are already producing compilation packs and re-releasing games at an extraordinary rate.

The most laudable of the compilations is *BackPack* (full title Kidsplay, The Back Pack), a compilation of ten games donated by various software houses. All proceeds from the pack go to the NSPCC (National Society for the Prevention of Cruelty to Children) and RSSPCC. The £9.99 Amstrad cassette and £14.99 disk versions of Battle Against Cruelty to Kids Pack contains olden goldies, such as *Xeno, Tempest, Monty on the Run, Starion* and *Nightshade*.

The Edge has knocked up *Classix 1*. Containing three games: *Bobby Bearing* (which according to the Edge recieved an AA Rave, which was news to us), *Brian Bloodaxe* and *Palitron* (which DID get an AA Rave). It retails for £6.99 on cassette and £12.99 on disk. The pack also includes demos of *Shao Lin's Road* and *Shadow Skimmer*.

WHSmith has *Action Pack 3* on its computer shelves. Four Alligata titles at £4.99 on cassette only: *Who Dares Wins II, Kettle, Trap,* and *Indoor Bowling*. Mike Mahoney from Alligata told us, "We normally give Smiths four months to sell our cassette product. After that we may release it on disk." October is the earliest the disk compilation is due. You can expect to fork out £9.99.

US Gold has two compilations under its belt. Both are cassette only and both hit you for £9.99. *Summer Gold* holds six games including *Impossible Mission, Bruce Lee* and *10th Frame*. *Coin-Op Classics* contains three arcade games: *Breakthru, Kung-Fu Master* and the previously unreleased *Crystal Castles*.

Due out in September is *Lucasfilm 4: The Prestige Collection* from Activision. *Rescue on Fractalus, Ballblazer, Koronis Rift* and the *Eidolon* will appear on two cassettes for £9.99 or disk at £14.99.

Elite will have *Hit Pak volume 2* ready on September 14th. Comprising of six titles, including *Shockway Rider, Light Force, Ace* and *Batty* (which hasn't previously been seen on the CPC). It will sell for £9.95 on cassette and £14.95 on disk.

Even Amsoft is in on the compilation madness. It's offering *Triple Gold* with *Congo Bongo, Up'n Down* and *Buck Rogers* on the menu. On cassette for £9.95 and disk for £11.95.

Eight budget titles are to appear under the tile of *The Power Plays*. For £9.99 you get *Barrier Reef, Timelord, Amstrad Shuffle* and other Power House games.

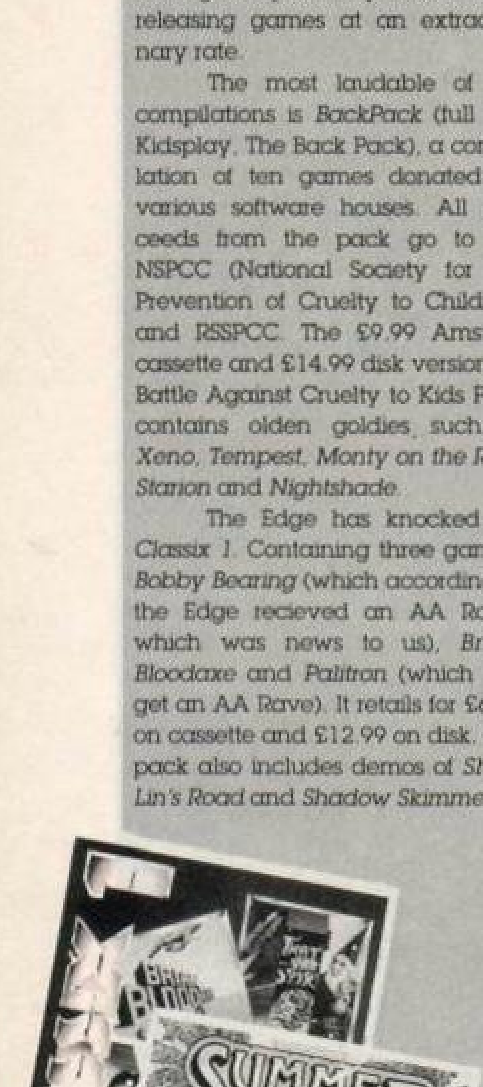
Two re-releases from Bug-Byte: *Core*, formally with an A'n'F sticker, and *Arena* which had Lothlorien plastered over it. Both have plunged in price to a preferable £2.99. Cassette only.

Alligata's fast scrolling shoot-em-up, *Z*, has been given a new lease of life by Rino Marketing. Now £4.99. Cassette only.

I hope you're reading this carefully because this is the paragraph where we get bored listing these re-releases and decide to digress into total irrelevance. Nice weather we're having lately don't you think?

Ricochet, yet another label from Mastertronic, has *Brian Jacks Superstar Challenge* on its re-release label. Price is the usual £1.99. Sharron Wade (see if you can spot her on the ad for the Sega games console) at Tronic told us, "There will be other re-releases on the Ricochet label at the PCW show."

Finally there's *International Karate*, by Endurance Games, to be re-launched at the bugdet price of £2.99 on cassette and £6.99 on disk. Let's hope you don't get too carried away with all this old software. Our advice is to support the charity compilation and, if your wallet can stand the strain, try to support original software as well as all these re-releases.





Freescape revealed

You may have noticed Freescape splashed across several obscure advertisments. Obscure as neither company name, address or telephone is present. A recent visit by Incentive's director, Ian Andrew, lifted the lid. Freescape, the result of a years work by Incentive programmers, is a three-dimensional environment simulator. It allows the operator to move and look at any point in a 3D landscape. Everything is displayed using solid graphics.

We have seen an impressive demo of Freescape: smooth and fast with spectacular interaction. The next generation of 8-bit computer software is here. Freescape will feature in the preview of the game *Driller* at the September PCW show.

Twenty megabytes on the way

Silicon Systems has decided to produce a 20 megabyte hard disk. This has resulted from interest generated by the Silicon Slices questionaire in AA 22. Tim Kay at Silicon hopes for an October release and added, "The hardware is virtually complete and half the software is written." When the hard drive appears it will boast Amsdos and CPM plus compatability. Further information from Silicon on 061 848 8959.

Budget business

An all-in-one package is being offered to the small business or self-employed person by SD Microsystems. For £24.95 you recieve the Small Trader's Pack on a three-inch disk: accounting, stock control, mailing list plus a suite of utilities. The program is fully menu-driven and comes with one meagre page of instructions - operation is that simple claims SD. Also on their list of new releases is CPC Invoicer, a low-cost sales invoicing package at £14.95 on disk. SD microsystems are stationed at PO Box 24, Hitchin, Herts.



F-15 Plus one

Digital Integration's answer to MicroProse's *F-15 Strike Eagle* simulation is *F-16 Combat Pilot*. You control the F-16: a highly manoeuvrable, multirole fighter aircraft. Your task is to locate - using a mass of instrumentation - enemy targets and eliminate them. A myriad of weapons is always at hand. Ilya Girson at Digital had this to say, "F-16 should appear in October, although anytime between then and Christmas is just as likely". Prices at the moment are £9.95 on cassette and £14.95 on disk. Further releases from Digital Integration include *ATF*, Advanced Tactical Fighter, and *Bob Sleigh*. These should hit the streets between now and January.

Future hit



Here at Future Publishing the offices are buzzing with excitment: our fourth publication - **Advanced Computer Entertainment** - is on the streets. Headed by Steve Cooke and former AA editor Peter Connor, it caters for all major 8-bit computers with particular attention given to new 16-bit machines. *ACE* is geared towards games players looking for something extra from a magazine, both in its assessment of games and other areas of computer entertainment like graphics and music.

It will have "more humour, deeper insight and greater reliability" says publisher Chris Anderson. One of *ACE*'s major new innovations is a revolutionary rating system called the Predicted Interest Curve, giving the most in-depth assessment of a game yet. *ACE* is on the newsstands now and costs 1.50.



Write word

Junior Wordpro has been updated. Remember back in issue 22 we gave it a less than wildly enthusiastic review? Well, all the disagreeable aspects of Wordpro have been removed and new features incorporated. Gone are the garish colours, the cursor is much more sedate, key auto-repeat is set to default, and getting to the end of a document no longer takes an age. New functions include: line insert, line delete and simple rejustification. The enhanced version looks better, performs satisfactorily, but has risen in price: £9.95 for cassette and £12.95 for disk. Phone Ramasoft on 0763 43715 for the full details.

How to be a computer *******



Adrian Edmundson, of Young Ones fame, wrote the best-selling book, How to be a Complete ****** *(I'm going to be coy and not print it - Ed)*. Virgin has decided to release a game based on the book. It features "Bastavision" which lets you view locations from two angles. You'll have to pay £8.95 to be a complete "person of dubious parentage". Virgin won't be releasing games on disk as Patricia Mitchell explained, "We haven't had an awful lot of sales of Amstrad software in the UK. So for the time being we shall stick to cassette."

Spend a penny

Domark is to release Jeffrey Archer's book, *Not a Penny More, Not a Penny Less*. According to Domark it will be a graphical adventure with you taking the role of one of the book characters. No release date yet, but the Atari ST version will be demonstrated at the PCW show.



If you pick your nose one more time, I'll give the licence to US Gold

The prodigal son

Jack the Nipper returns in a new adventure, *Coconut Capers*. This meddlesome character is plonked in the middle of the Australian desert. Well it's his own fault because on the way to Australia, after being deported from Britain, he decides to jump from the aircraft. Jack, in true style, must be as naughty as possible to gain 100% on the Naughtyometer. Not an easy task when he has natives and his father after him. Plus, of course, the other Aussie creatures which he'll undoubtedly annoy on his travels. Join Jack and his downunder pals in Gremlin's £9.99 cassette, £14.99 disk, game.

Big top moves north

The next Amstrad computer show will be held at the G-Mex exhibition centre in Manchester. For three days starting on the 23rd of October you'll have the chance to view and purchase the latest from Amstrad and the many other exhibitors - or come and interrogate the experts. Price at the door is £3 for adults and £2 for under 16's. Tickets can be ordered in advance from Database Exhibitions on 061 480 0171 at a saving of £1.

Gold games

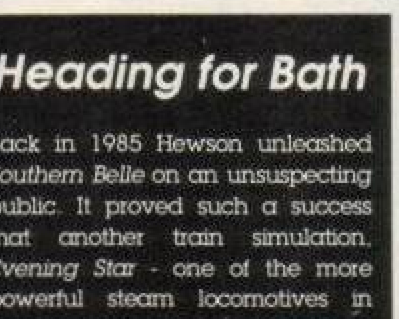
Amsoft, after a long period of quiet, has two new titles on their Gold label: *Zaxxon* and *Spy Hunter*. Both will retail for £9.95 on cassette and £11.95 on disk.





Pieces of eight

Microprose has been busy with simulations recently. Three are due out in the coming months. The first, *Pirates*, will have you sailing around the caribbean as captain of a 17th century privateer. The second is *Airborne Ranger*, in which you control a soldier capable of running or crawling through ditches and ravines in 3D. Finally *Project: Stealth Fighter*, the famous non-existent American aircraft. The scenarios are based on current US airforce training, aircraft carrier and land based missions included. All three games will be available shortly. Prices are provisionally set at £14.95 on cassette and £19.95 on disk.





Heading for Bath

Back in 1985 Hewson unleashed *Southern Belle* on an unsuspecting public. It proved such a success that another train simulation, *Evening Star* - one of the more powerful steam locomotives in British history, is in the pipeline. Route: Bournemouth to Bath. Fee: £8.95 casette, £14.95 disk.

Hubble bubble

The arcade game *Bubble Bobble* is due for the Amstrad in coming months. Under the Firebird label the game features the one hundred screens of the arcade original. Price and release date are not fixed.

Sky high

Gatwick Airport, which has a flight landing or departing every two minutes, has several Amstrad 6128s in its entourage. To aid the 15 million-plus passengers that pass through its terminals, Gatwick joined forces with BA (formerly British Airports Authority) to supply an intelligible, up-to-the-minute information system. Data Applications from Cirencester was the company that eventually undertook the job of providing a colour graphics generator and decided on using the humble 6128. Jim Tappenden at Applications claimed that any microcomputer could have been used, however, not at such a competitive price. Next time you pass the information desk or check-in counter peer at the display system. You can feel proud, after all, there's a CPC behind it. Somewhere.

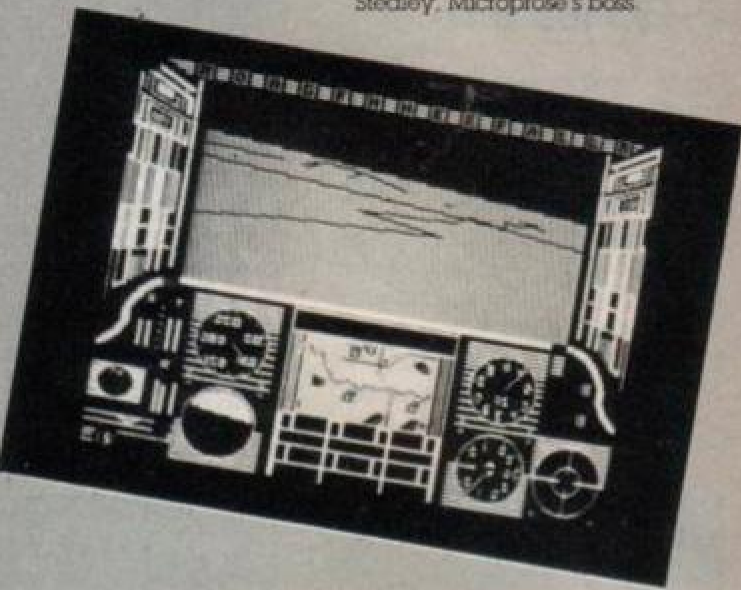
Tough guys

Early October will see *Butch Hard Guy* on the shelves - a 20 screen platform game with hero, Butch. The idea is to smash cages and free prisoners of war. No weapons are needed as Butch is tough and used to the rough stuff. Look out for the Advance Software Promotions sticker accompanying the £9.95 price.

Warrior chopper

Gunship, a helicopter simulation from MicroProse, is due to be released later this year. The helicopter in question is the Hughes AH-64A Apache, one of the most advanced warrior choppers used in modern day warfare. Over $1.5 million and five years have gone into the making of the simulation. Excessive by British standards, but in America time and money are plentiful.

High-speed, low-level flight over political hot-spots, advanced weaponry systems and guidance instrumentation are promised in *Gunship*. At a to-be-anounced price you can take to the air and blast anyone not on good terms with Uncle Sam or "Wild" Bill Stealey, Microprose's boss.



King Formula

November 19th is the release date for Martech's *Nigel Mansell's Grand Prix* racing game. The game will feature much of the instrumentation of modern day cars. Included is a communications link to the pit enabling the rest of the team to pass vital race information. Various levels of play are to be programmed into the game - the beginner level allowing you to career round the track, without having to worry about fuel consumption or tyre wear.

Martech has the licence to Slaine, the popular 2000AD hero, and hope to have him hopping on your screen in late September. The game, *Slaine the King*, is an adventure with arcade elements. You take over Slaine's mind and must decide what to do when taxing situations occur. Slaine is controlled using a new movement technique, Reflex. According to Martech, this technique is unique and far simpler than conventional methods. Prices for both games have yet to be fixed.





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Piranha

PIRANHA

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Piranha

Back to Font Design

Pat McDonald investigates a package for creating your own character fonts

Character Font Designer

Goldmark (07072 71529), £7.99 tape, £11.99 disk, all CPC's

Having released printer buffer upgrade for the DMP2000/3000, Goldmark have now come up with a program that, amongst other things,lets you use all that extra memory - a *Character Font Designer*.

A what? *CFD* is a program that will let you change the design of a printed character so that, for example, you could print letters in different alphabets like Cyrillic or Greek. Needless to say, your printer must be Epson compatible and should posess as much memory as possible to remember all those extra characters.

You can also change your Amstrad's own characters to whatever you want, and then use this new typestyle from your own programs and even some wordprocessors. Finally, you can change the Amstrad key layout to a different configuration - some countries use an AZERTY keyboard instead of QWERTY. (Look at the top left of your Arnold keyboard)

With this program, setting up such changes is easier for the uninitiated than delving into the murky depths of the manual. In fact, all these operations can be done from Basic - but this program simplifies the operation.

Font command menu

The package is supplied on tape or disk in a medium sized box with a small manual. If you have a disk drive, buy the disk version - the tape version apparently doesn't like being backed up. One obvious omission is any ready prepared fonts for the printer - it would have been nice to have some examples of just what this program is capable of.

To use the program is a straightforward task. You're presented with two different sized grids (one for the printer, one for the screen), a menu, a message area and a tryout area where your designs can be printed, so you can see them as they will actually appear. You can either use a joystick or the keyboard to control the program.

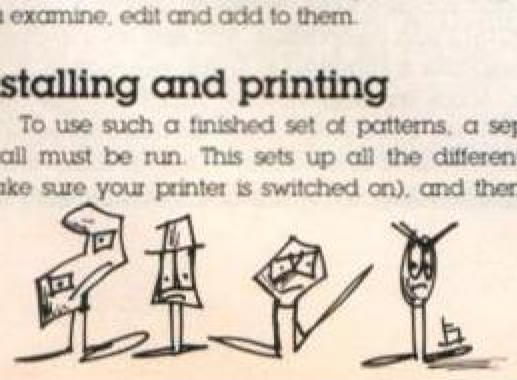
The menu consists of the following:

- **Edit** will pick up a character from the computer and display its on/off pattern on the Amstrad (8 dots by 8 dots) grid. The printer grid (11 dots by 9 dots) cannot be read in this way - because printers rarely talk to computers.
- **Clear** will put either or both grids to off, whereas Set can switch all the dots on. **Inverse** will give a negative of the grid - black becomes white and vice versa.
- **Move** is a very useful command for fine tuning your design. If you think a full stop is being printed too high, or a capital is too low, this command can shift the whole pattern in any direction. Of course anything at the edges will be lost, so make sure you move it in the right direction.
- **Mirror** and **Rotate** need little explanation. They simply translate the character in the stated way, either reflecting through 180 degrees in the X or Y axis, or turning the pattern 90 degrees in a clockwise or anticlockwise direction.
- **Info** lets you look at what you have already done, to save you missing a character or duplicating one. **Manual** is a similar command that puts such information to the printer, making a permanent record.
- **Retain** and **Release** are at the heart of the program - they let you choose what keys and character patterns you want reserved and those you want to reject. The program recognises the Shift keys, so really the keyboard can be setup as virtually any alphabet. You can edit any character from 0 to 255, but the manual wisely suggests you let alone 0-31 unless you know what you are doing - these are control characters.
- **Save** lets you save a set of such patterns to tape or disk, and **Load** lets you examine, edit and add to them.

Installing and printing

To use such a finished set of patterns, a separate program called Install must be run. This sets up all the different characters and keys (make sure your printer is switched on), and then gives back control to you. Now, I did say that any characters produced by this would work with some wordprocessors - the exceptions are, in general, any that require CPM, such as *Wordstar*.

CFD can be made to work even better. The Amstrad CPC has a minor problem known as a 7 bit printer port. This means that you can only print characters 0 through 127. You can buy something called an 8 bit printer port which lets you print characters 0 through 255. If you have one, this program will also let you design characters with an extra row of dots in. This sounds trivial but it's a nice touch, and your letters will look just that little bit better than before.



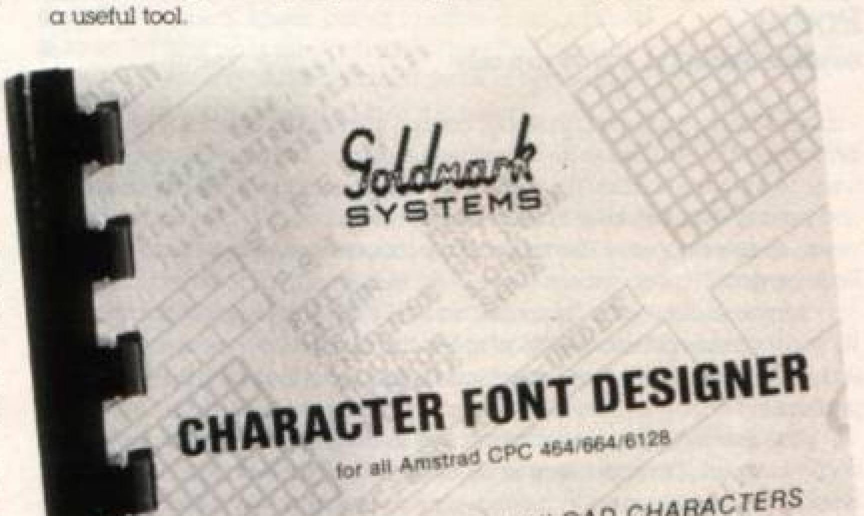
Motorway pileup

Now to the other side of the coin. The manual for this is neat and petite, but has been laid out with the thoughfulness of a motorway pile up. Example - the first thing you need to do is to load the program. The loading instructions are stuck right in the middle of the booklet.

The on screen presentation is very good. However, if you try to leave the menu area, you are treated to an electronic dirge. WHY? Turn the sound down before it drives you round the bend.

CFD is written in Basic, and so the responses of the program are not lightning quick, but they're perfectly adequate.

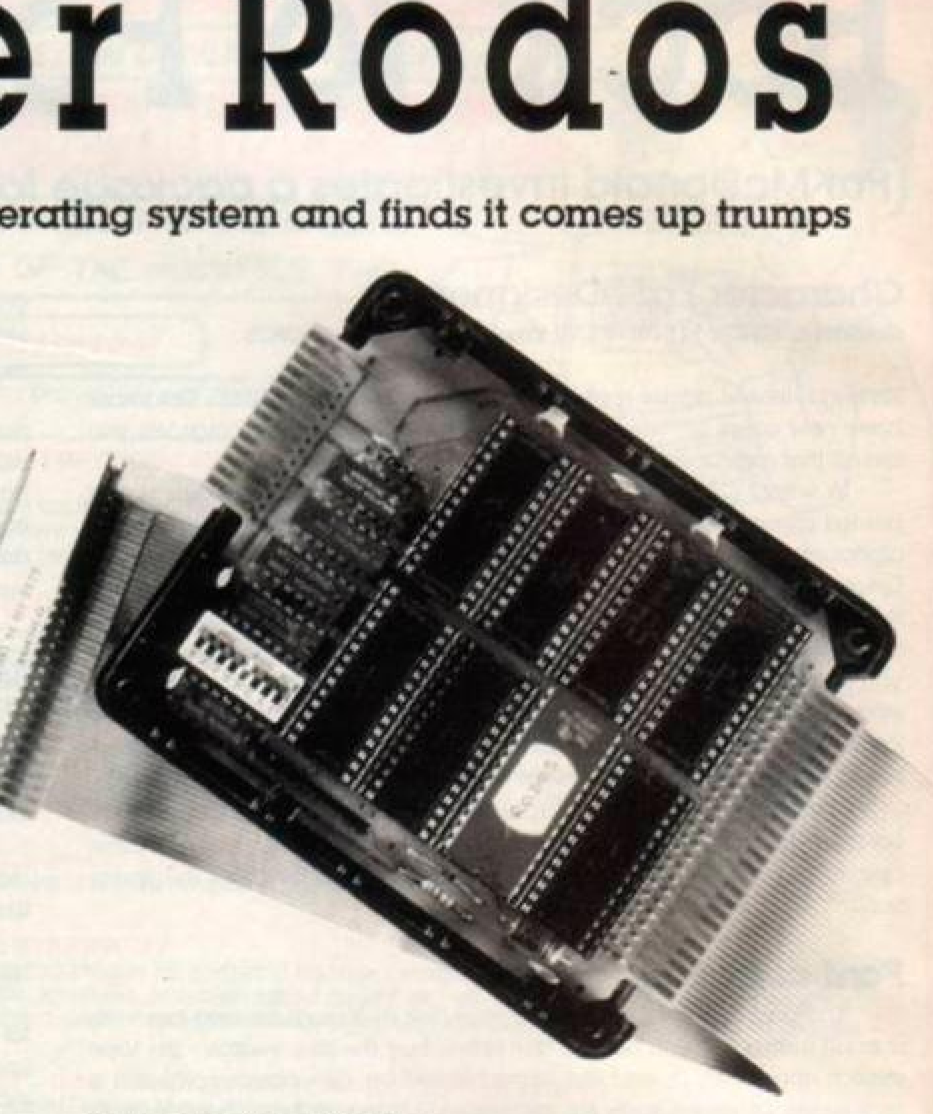
In conclusion, the manuals offputting style is largely compensated for by the programs openness. *CFD* may well be the answer to your prayers if you are prepared to spend time (and quite possibly money) on incorparating it into your present system. To the right person, it would be a useful tool.



GOOD NEWS	BAD NEWS
■ Very useful if you want different characters. ■ Program is user friendly and clear. ■ Cheaper than its competitors.	■ Manual is badly laid out. ■ Competition supplies more features, but at a higher price.

Discover Rodos

Richard Monteiro tests out a new disk operating system and finds it comes up trumps



Rodos

Romantic Robot Ltd, £29.95 rom only

Back in March '86 Romantic Robot caused something of a stir when they introduced the *Multiface II* - a hardware device capable of transferring cassette software to disk. It's capable of stopping a program in mid flight and saving all its details: colours, mode, sound, the lot. Now, after two years of development Romantic have another stunning product: the *Rodos* system.

Mathew Edwards, programmer of the Romantic Robot game *Wriggler* (reviewed issue 4), has spent the last couple years perfecting Rodos - an impressive feat when you realise what he has managed single handed.

The *Rodos* system is best thought of as two seperate entities within a single 16k rom. On one side you have *Rodos* - a powerful disk operating system which runs hand in glove with Amsdos - and on the other *RECS* (Rom Extended Command System), which gives extra operating system commands. *Rodos* and *Recs* provide the user with extra bar commands. Both systems work with or without the other.

System requirements

To make use of *Rodos* you need a romboard and a disk drive. A romboard is a tiny box that gets plugged into your computer's expansion port. It lets you insert rom chips which can contain anything from a word processor to a game. Having a program on rom means you don't have to wait for it to load - it's there the instant you want it. You simply access it by entering a command.

One of the best romboards available comes from Rombo Productions (0506 39046) based in Livingston. At a cost of £39.95 the Rombo romboard can house upto 8 roms. A cheaper alternative is Infotek Design's (0536 20 1743) board which retails for £15.95. If you own a 664 or 6128 then you already have a disk drive. Amstrad 464 users will need the DDI-1 disk drive and interface. Supplied by Amstrad (0277 228888) they cost £150.

Of course, if you want to release the full potential of *Rodos*, an extra disk drive and memory expansion come in handy.

Introducing Rodos

Assuming you have a romboard, insert the multi-legged beast into a free socket. Switching on your computer results in a Rodos start-up message and a beep. The sound tells you that *Rodos* has been fully initialised. *Rodos* preserves internal settings during a soft-reset (put into effect by pressing the shift-control-esc combination) and therefore doesn't beep every time you reset. During a reset you can either hold down R to initialise internal settings or D to disable *Rodos*.

Rodos is fully compatible, and for the most part transparent, with Amsdos. Basic commands such as CAT, LOAD and SAVE that access the disk are unaffected. Amsdos bar commands are still there: they just carry more clout. Of course there are novelties for disk users to bite into:

- |ACCESS alters file status. Depending on the parameters you supply a file may be read, write or both.
- |BGET will return a byte from a file while |BPUT places a byte in a file.
- |DUMP sends a hexadecimal listing of a file to the screen.
- |EB erases all backup files (those with .BAK extension)
- |EXEC loads an Ascii file. If a line is encountered that starts with a bar (|) it will be executed otherwise the line is printed on the screen.
- |FORMAT formats a disk to either IBM, CPM, *Rodos* or data specification.
- |INFO gives extended file information.
- |READSECT reads a particular sector into memory. |WRITESEC does the opposite.

The deeper directories

Under Amsdos a disk may be split into sections with the USER command. These can be thought of as separate directories. They are labelled with numbers, in the range 0 to 15. Unfortunately this system is tedious to use and impossible to structure. *Rodos* allows true structured hierarchical directories and sub-directories, similar to Unix and MSDOS - systems found on the PC1512 and compatibles. You can use sub-directories and the like only if your disk is formatted to *Rodos* specification.

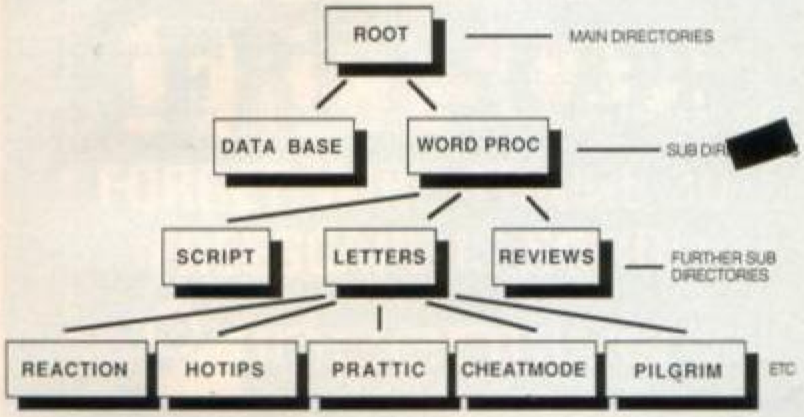
The main, or root, *Rodos* directory has the name "/". This corresponds to the directory you see when cataloguing the disk from Amsdos. *Rodos* lets you create named sub-directories from within the main directory and further sub-directories within sub-directories. There are numerous

commands that aid you with this type of tree directory system - but they are badly explained in the *Rodos* manual. So, for a clearer idea of how this system works, have a look at the diagram and explanation below.

FIG ONE



FIG TWO



The first figure demonstrates how the USER function works under Amsdos: all the directories are at the same level. Figure II shows the sort of multi-level directory structure that could easily result from the AA office using *Rodos*. In the example, the main or root directory gives a choice between the word-processor and database directory. From the word-processor directory you can choose manuscripts, letters or reviews. The letters directory leads to a choice of five further letter-type directories: Reaction, Hot Tips, Problem Attic, Cheat Mode or Pilgrim.

A hierarchical directory is useful for keeping related files together. In theory there is no limit to the depth to which directories may be nested. However, in practice it makes sense to go down at most three or four steps. To load a file from a deep sub-directory requires something like LOAD "/name of 1st-level directory/name of 2nd-level directory/ ... /name of nth-level directory/filename/".

A particulary nice feature about *Rodos* is that you can have filenames up to 16 characters - handy when you wish to transfer files from tape to disk, as no renaming is necessary. Filenames can be either upper or lower case - very slick. You can even title the disk.

The standard Amstrad drive can read a 178k (or 179.5k in *Rodos* format) disk at best. This small stage doesn't allow much scope for an MS DOS-like operating system to strut its stuff. However, external 40 or 80 track drives can be added without extra hardware. *Rodos* glows best if it has masses of storage to play with.

Reaches the parts...

If you have several roms plugged into a romboard then there's a fair chance that some command-names will be identical. For example, you have a utility in rom-socket six and *Rodos* in three. Both have a command |LOAD. But how are you to know which will be accessed? The rom with higher priority (lower rom-socket number) will always get there first.

Under normal circumstances there is no method for getting at the command in the low priority rom. *Rodos* introduces a neat (and unique) method for overcoming this problem. Say you wished to use the |LOAD command from rom six: type |6LOAD. In other words, include the rom number (0 to 9) at the beginning of the command-name to ensure the command reaches the required rom.

Extended commands

The other half of *Rodos* is taken up by partner *RECS*. The rom extended command system, as it is better known, adds a multitude of commands which can be used in conjunction with *Rodos* or seperately.

Recs includes a Command Line Interpreter. The interpreter is entered by typing CLI or pressing shift and the small enter key. A bar appears at the left margin. You can type any external command and it will be obeyed. This is particularly useful for 464 users who have to go through an awful palaver to rename a file:

```
a$="old-filename"
b$="new-filename"
|ren,@b$,@a$
```

From CLI the above is reduced to ren new-filename old-filename. As well as ren you also have the commands:

- |ASKRAM returns the amount of available ram.
- |HELP displays rom numbers and names and, if accompanied with a rom number, shows all the commands from a particular rom.
- |DO on its own enters the command line interpreter, but will execute the command within a string if present. For example, in Basic you could have:

```
10 INPUT a$
20 IF a$="TAPE" THEN |TAPE
30 IF a$="DISC" THEN |DISC
```

etc

However, using the |DO command:

```
10 INPUT a$
20 |DO,a$
```

- |PEEK and |POKE fetch a byte or place a byte in memory. If you have extra memory then you can peek and poke that.
- |PRINT redirects screen output to either a file or printer.
- |PRBUFF sets up a printer buffer. This allows you to send something to the printer without causing the computer to hang up.
- |TDUMP dumps a text screen to the printer.

All change

One interesting command available from *Recs* is |ALIAS. It lets you substitute a new bar command-name for an old one - customisation of any bar command is acceptable. An extraordinary option. Imagine the command |FAST-DISK-FORMAT exists. Wouldn't it be much neater to type |FF? By using |ALIAS, "FF", "FAST-DISK-FORMAT", it's possible.

Powerful programs can be written and spectacular results achieved. It requires much trial-and-error to bring out the best of *Rodos*: sadly the draft copy of the manual is brief. Too brief for such a powerful system. If you don't read between the lines you may miss important apects of the system. For example, a silicon or ram disk can be set up - you do need 128k or more though - by setting up a printer buffer and formatting it. Experiment and you will find other intriguing possibilities.

Rodos is a far better operating system than Amsdos. The whole arrangement makes it easier for you to manipulate files, drives and indeed all the Amstrad's internals. Full marks to Romantic for making *Rodos* everything Amsdos isn't. A crying shame that the manual lets down an otherwise excellent product.

Romantic Robot Ltd, 15 Hayland Close, London NW9 OLH ☎ 01 200 8870

GOOD NEWS	BAD NEWS
■ *Rodos* allows 16 characters per filename. ■ Sub-directories unheard of on CPC's before. ■ Built in formatter. ■ Numerous commands speed up mundane tasks. ■ Rom priorities can be altered. ■ Extra memory gives silicon disk or printer buffer.	■ Manual is sketchy on many fronts in particular the hierarchical directory system. ■ A pity only users with romboard and disk drive can use *Rodos*.

Dear Diary...

Can a computer diary help organise Pat McDonald's life, or reviews?

Tas-Diary

Tasman (0532 438301), £12.99 disk only, all CPC's.

Tasman has been around for a good while now, and have produced the excellent *Tas-word* wordprocessor, *Tas-Spell* checkers, screen copiers and print utilities. With that sort of a track record much is expected of one of their latest products - *Tas-Diary*.

Now, it may seem that a paper diary is much more convenient than a computer one. After all, you don't need to switch it on, or make sure you have the right disk, or fiddle about with passwords etc. All you have to do is pick it up, consult it and add to it.

Where electronic diaries score is that they are more secure, much tidier and generally have a lot more space to write in. The comparison is similar to that between a wordprocessor and a typewriter.

Tasdiary is supplied (on disk only) in the usual slimline Tasman pack with an A5 sized manual. The diary works by dividing itself into months; only one month of a particular year, between 1753 and 2100, may be accessed at a time. Each month has the requisite number of days displayed on a calendar, and each day can store up to 974 characters.

Thoughts for the day

When first loaded, a six figure alphanumeric password must be entered before the program will allow you past this point.

The manual gives a short but thorough examination of the programs different parts. These are:

Open Mode. From here you can open the diary at a particular month, go to the miscellaneous mode or open the notepad.

Standby Mode. This lets you examine and edit the diary, search through a month for a particular string, go to the notepad or the miscellaneous menu. Choosing the day of the diary you wish to examine is accomplished by moving a cursor around a calendar on-screen.

Editor Mode. When you are in the right day, you will naturally have to first put in your information. Editing is simple, the cursor keys move you around the page (about 150 words) to put in your times and dates. You can also sort them by the first four characters of each line, so it's easy to get things in time order.

Miscellaneous Mode. Most of the housekeeping tasks are available from here. These include changing the time and date, cataloguing and erasing files, changing the front end password, clear the text screen, and searching for a particular word or number.

Notepad Mode. This provides an extra 31 pages in which to write notes. These are saved with the diary when you select the shut item. There is also a transient memopad available which cannot be saved.

On screen presentation is, I believe, a distinct improvement over former Tasman offerings. The manual is well laid out and I cannot seriously fault it. Indeed, the only point of the whole package I can quibble about is the editor which lacks a true insert mode.

It also lists a good few examples of diaries - personal, business appointments, menus and financial.

There you have it, the best of its type that I've yet seen. If you're looking for a flexible program which can be used for professional or personal diaries, look no further.

GOOD NEWS	BAD NEWS
■ Very user friendly and flexible. ■ The best of its kind.	■ Editor lacks a proper insert mode.

Get down and hack

Has Richard Monteiro got his hands on the ultimate hacking tool?

Discology

Siren Software, £14.99 disk only

Siren Software's past products have been developed in-house. Its latest product doesn't even come from Britian, but from the across the Channel. Lately the French have produced top-class, original game software. Now they are entering the utility sector with a bang.

Discology is a disk housekeeping utility. It offers similar features to *Oddjob*, *Bonzo Doo Dah* and *Supadisc*, but with a lot more punch and a host of new ones.

From the main menu you can choose the Editor, Copier, Explorer or Help files. Items are selected from pulldown menus. It's very easy to use, and gives the product much more pizazz - it doesn't leave you with that home-brew impression that many packages have.

The Editor lets you access and alter sectors on a disk. However, unlike many other disk utility packages, it lets you meddle with any disk - even those with non-standard formats. This makes things easy if, say, you are looking for an infinite-lives poke on one of your game disks. But that's just skimming the surface: the contents of individual sectors can be displayed in Ascii, decimal, octal, binary or even Z80 mnemonics. Plus, if you think that the data you are inspecting on the disk is Basic, you can opt to view it in Basic format - neat. You also have a calculator which you can pull down at any time to perform the odd addition.

Getting your backup

Neither Siren Software nor the Amstrad Action team condone software piracy. It is theft. However, we do recognize the legitimate need for backing up original software. Disks can corrupt. Much better to have the original tucked away safely and use a copy for day-to-day chores.

The Copier is easily the most powerful for the Amstrad. It can copy disks on 5 1/4 and 3 1/2 inch formats (assuming you have the correct drive). Format details are displayed each time a track is read. If you own a 6128 or 464 with extra memory you can take advantage of this because disks are copied in two passes. File copying, formatting and tape-to-disk transfer are also available under the Copier option.

If you want further details on a disk's format, Explorer comes in handy. It gives graphical details of sectors and extended file information.

There are so many nice things about *Discology* that it is hard to find fault with it. It's a pleasure to use, it's menu-driven for simple selection and very speedy to respond. It beats the opposition by doing a better job and having more to offer.

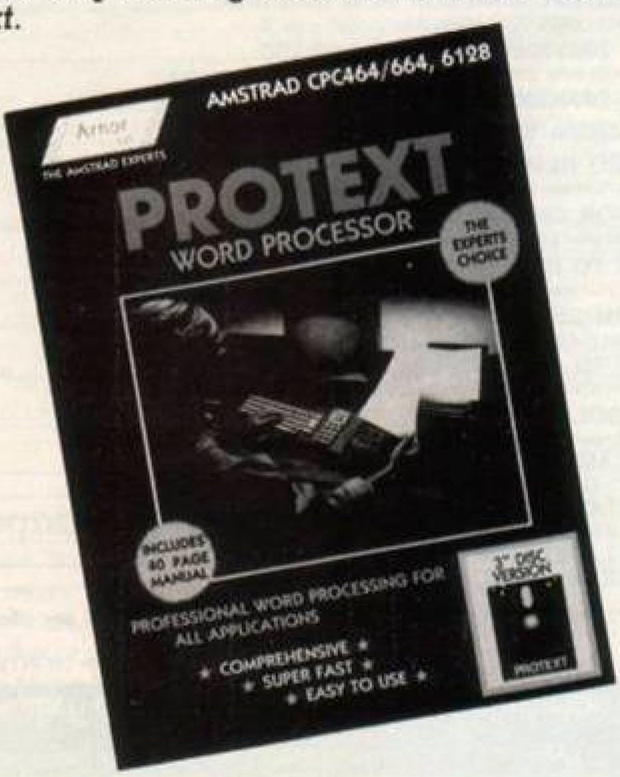
Siren Software ☎ 061-228 1831
2 Oxford Road, Manchester, M1 5QA

GOOD NEWS	BAD NEWS
■ Pulldown menus are a joy to use. ■ Sector contents can de displayed using Z80 opcodes. ■ Makes extensive use of extra 64k (if your machine has it). ■ Editor and copier are the most competent around. ■ Beats the rest hands-down.	■ Can't copy itself.

WORDS WORK

How to get the most from your word-processor and printer

Our Words Work mail bag is starting to over-flow which is an encouraging sign. To clear the deck a little we have devoted a page to your tips and queries. But first, the best way of using stored commands from within *Protext*.



Stored commands

Protext allows you to place stored commands - instructions to the printer - within the document. These aren't to be confused with printer control codes which appear as inverse characters on the screen and, when the document is printed, alter the style of print: bold, italics, underline and so on. Stored commands cover such things as header and footer space, defining page length and setting the line spacing. Each command occupies a line on its own and is treated as normal text when editing. However, when the document is sent to the printer the commands are obeyed and not printed.

By placing a greater-than (>) sign at the beginning of a line, you inform *Protext* that whatever follows is a stored command. Using three symbols (>>>) allows you to enter a comment line - similar to a REM statement in Basic. This can be useful to store the date on which the document was written:

```
>>> Finished on Tuesday 25th August 1987 at 17:05
```

Printing a document without stored commands causes *Protext* to use default printer settings - held in the SETPRINT menus. Stored commands override the default settings. Stored commands can be placed in several categories: printing layout, paper layout, miscellaneous.

Printer perfect

This group of commands instruct the printer where text is to be printed. For example you can choose to number pages at either top or bottom of the page. You may wish to leave a blank page or a few lines for a picture or diagram. Or perhaps you need to write a manuscript or review where double-line spacing (or greater) is required. These and similar stunts can be simply established with a scattering of stored commands.

No matter how clever your printer is, it can not discern the dimensions of the paper it is fed. You must supply *Protext* with this information. This, in turn, gets passed to the printer. Many of the stored printer layout commands aren't necessary: page length for one. Its default value is set at 66 lines - ideal for 11 inch paper. Unless you plan on using single-sheet stationery of varying sizes this instruction is useless. However, for the most the printer layout commands are a godsend.

The printer layout commands allow you to define the top, bottom and left margins of a page. You may also specify header and footer margin sizes. Headers are particularly useful for printing titles and addresses whereas footers are ideql for printing AA style page bottoms.

The miscellaneous commands are arguably the most useful. For example, using the command OC you can ouput codes directly to the printer. Sure, it's easier to use control codes. However, if you wish to select an option that isn't included in the control code list or there is no space to program more using SETPRINT, then you'll be thankful for this method of sending printer instructions. Sadly the Amstrad has a 7-bit printer port: data below 127 is all that will be accepted. An 8-bit port can be purchased from KDS (0458 53 2076) for £19.55. This lets you send data between zero and 255.

Other possibilities include loading a printer file, switching to continuous printing, enabling form feeds, waiting for a keypress and executing external commands (bar commands such as |TAPE).

If you are stuck for ideas on how best to implement the stored commands, try this:

```
>>> Circular template
>pr driver                                   ;load printer driver
>ls2                                         ;double line spacing
>he Amstrad Action Circular                  ;header text
>fo Issued by slave drive, Bob Wade          ;footer text
>-------!-------!-------!-------!-------!-------!-------!R
```

This just skims the surface. Pages 28 to 33 of the *Protext* manual give further details on stored commands. Read them and then try creating your own document template. Users of the CPM versions of *Protext* have several advanced stored commands: files can be merged into the document and printed, microspacing is possible (space between every word in a line is identical), printer characters can be redefined and the number of copies to be printed specified. Chapter 2, page 23, of the manual details all the commands.

Printing from *Tasword* will be covered next month. You can also expect a stack of your tips and tricks. And just to whet your appetite for the forth-coming months: Steven Grande, programmer of the Pendown word-processor, will uncover many of Pendown's secrets.

Ways with words

Do you have favourite tricks for getting the best out of your word-processor? Or do you have seemingly insurmountable problems? Share them with other Amstrad addicts. Send them in to: **Words Work, Amstrad Action, 4 Queen St, Bath, BA1 1EJ.**

For whom the bell tolls

Here are a couple of hints for *Tasword* 464 users. The first sounds a bell when *Tasword* has finished loading. The second provides on-screen numbering when printing multiple copies.

Alter line 180 for the bell:






```
180 GOSUB 300:LOCATE 2,10:PRINT"Loading...Tasword...":
    MEMORY mh:LOAD"!tasword.bin":CLOSEIN:PRINT CHR$(7):
    FOR z=1 TO 500:NEXT:PRINT CHR$(7):MEMORY ml
```

And for on-screen numbering:

```
1165 LOCATE 6,12:PRINT"PRINTING COPY No.";nc;" ( of ";
     FNppk(58);")"
```

Patrick Devine
Norfolk Street, Glasgow

Time saver

It gets tedious having to type `RUN"tasword"` every time you want the program. The quickest way to load *Tasword* is by using a short filename:

1. Run *Tasword* and enter basic.
2. Type `SAVE"T" <return>`.

From now on type `RUN"T"` to get into *Tasword* - a 50% reduction in key-presses.
Martin Southwold
Chorlton-cum-Hardy, Manchester

Incompatible printer codes

I have a Silver Reed EXP400 which I use with *Protext*. I can access bold print without any problem. However, I have just bought a Silver Reed EXP500 and, unbelievably, the codes for accessing bold are different. Is there any manner in which I can get bold print from within *Protext*?
Gwen Kitchener
Knighton Fields, Leicester

Protext, *as it stands, sends codes that only Epson-compatible printers recognize. The Silver Reed EXP400 is such a printer. Unfortunately the EXP500 is not. It uses codes similar to the Diablo range of printers. This doesn't mean you won't be able to use bold and other commands from* Protext. Protext *lets you alter the codes that are sent to the printer:*

- Get into the *Protext* command mode.
- Type SETPRINT.
- Answer n to the first quesion - y to the second.
- Press B to select bold.
- Enter 27 31 2 for on. Enter 27 31 12 for off.
- Press ESC three times to get back to your text.

You have now set Protext *to recognise the codes for bold. There is a catch however: the EXP500 requires you to send the characters you wish to appear in bold twice. Say you want TEXT to appear in bold: bTbTbEbEbXbXbTbT is what you would have to enter into the word-processor.*

Disk version

If anyone has Amsoft's ancient word-processor, *Easi-Amsword*, then the following modification might be useful if you wish to transfer it to disk. The easi-to-follow menu system has been retained, although several options have been modified.

Toggle (Slow or Fast tape speed) has been replaced by Toggle (Drive A or Drive B). Tapeprint has similarly been altered. It now enables you to catalogue the disk. But first ,you must transfer the program files to disk. Achieved by entering in direct mode:

```
|TAPE.IN:LOAD""
570 RUN"EASIAMS2.BAS"
SAVE"EASIAMS1"
LOAD""
```

```
3 LOAD"EASIAMS3.BIN",h-&4A
2000 ' Save doc to disk
2001 |DISC
2020 IF SF$="Drive [A]" THEN |A ELSE |B
4000 ' retrieve doc from disk
4001 |DISC
4500 IF SF$="Drive [A]" THEN |A ELSE |B
4505 ON ERROR GOTO 4700:GOSUB 38000,39400:OPENIN"!"+N$
6005 IF SP$="Drive [A]" THEN |A ELSE |B
6010 IF Z$="R" THEN CAT
6015 IF Z$="A" THEN RETURN
6020 Z$=INKEY$:IF Z$="" THEN 6020
9060 LOCATE #4,1,4:PRINT #4,"oad"
9086 LOCATE #4,1,7:PRINT #4,"isc Cat"
9087 LOCATE #4,1,8:PRINT #4,"edefine colours"
37240 WINDOW #4,17,31,9,22:PAPER #4,1:PEN #4,0
40030 ME$="CENLSPDR":CT$="TAR":PN$=" ,.;":SF$="Drive [B]":
      TB$=SPACE$(80):IN$="OVERTYPE":PR$="WLJDSMPFAR":
      PW%=72:PL%=60:JU$="Y":LF$="N":LM%=5:PF%=12:SL%=24:
      PC%=1:PS%(0)=27:PS%(1)=64:CR$="ABCD":EP%=0:ET%=26:
      FF$=CHR$(224)
44000 ' Disk drive menu
44010 CLS:CLS #2:LOCATE #2,14,1:PRINT#2,"DISK DRIVE MENU"
44030 LOCATE 10,10:PRINT"oggle Disk Drive ("+SF$+")"
44045 LOCATE 10,14:PRINT"eady (Disk Drive selected)"
44200 IF SF$="Drive [A]" THEN SF$="Drive [B]" ELSE SF$=
      "Drive [A]"
```

```
SAVE"EASIAMS2"
MEMORY &3FFF:LOAD"",&4000
SAVE"EASIAMS3",B,&4000,&D2
```

Reset the machine and type `RUN"EASIAMS1"` to use *Easi-Amsword* from Disk.
Tony Turner
Hazlemere, Bucks

Extra printer functions

If you own the Citizen 120D (or compatible) printer then here are a few extra sets of control codes that you may like to incorporate within *Protext's* SETPRINT option. For example to get overstrike (the opposite to understrike or underline) type SETPRINT from the *PROTEXT* command mode, answer n to the first question, answer y to the second. Press o and enter `27 126 53 49 27 95 49` for the on code and `27 95 48 27 126 53 48` for off. following is a table of other useful ones:

Letter	On-Code	Off-Code	Effect
r	27 126 50 49	27 126 50 48	Reverse print
v	27 126 49 49	27 126 49 48	Vertically enlarged
z	27 126 52 49	27 126 52 48	Slashed zero

Adrian Pegg
Osborne Rd, London

Mini-Office marvel

Here's an oddity that occurs when using the *Mini-Office* word-processor. Enter the 40-column mode and start writing using double spacing. When you have written half your document go back to the top and fill up the blank lines. Save the text, clear the text, change to 80-column mode and re-load the text. If you counted your lines correctly you should get your text back in two columns. It should be possible to get 4 columns by using the 20 column mode. Line counting could be tricky though.
Ron Izett
Maidstone, Kent

Perforation skip

When sending a listing to a printer it is handy to be able to skip over a few blank lines at the perforations. There is a dip switch on the DMP 2000 and, undoubtedly, on other printers too. I find that setting the dip-switch causes havoc with printouts from *Tasword* and therfore leave it off.

The skip perforation facility can be enabled through software:

```
10 ' reset printer and skip perforation
20 r$=CHR$(27)+CHR$(64):s$=CHR$(27)+CHR$(78)+CHR$(5)
30 PRINT #8,r$;s$:END
```

Graham Bennett
Hereford

PROBLEM ATTIC

Help! I need somebody. Help! Not just anybody. Help! You know I need RpM. HELP!

Altering file status

First, is there an easy way to catalogue hidden files without entering CPM? And second, is it possible to alter a file's status (in other words, change from read-only to read-write) from Basic?

Garth Blackwell
Hamilton, New Zealand

Several readers have asked if this is possible. I have written a shortish program to do the job. However, in answer to your questions, Garth, no - there isn't any simple way of meddling with a file.

The program below consists of machine-code data which will alter a file's vital statistics. If you wish to catalogue all hidden files enter ".*" when asked* **Filename (including extension)?"** *Otherwise enter the name of the file you want. It shouldn't prove impossible to incorporate this routine within your own programs.*

Remove the write-protect tab: the program writes to the disk.

```
1 ' File status
2 ' by Richard Monteiro
3 ' Amstrad Action    September 97
10 ON BREAK GOSUB 340
20 IF PEEK(&9000)=&ED THEN 100 ELSE MEMORY &7FFF
30 FOR t=&9000 TO &9051: READ a$: POKE t,VAL("&"+a$): NEXT
40 DATA ED,73,4F,90,21,51,90,CD,D4,BC,22,52,90,79,32
50 DATA 54,90,2A,42,BE,11,0F,00,19,7E,FE,41,CC,3B,90
60 DATA C4,40,90,06,04,21,00,80,1E,00,C5,D5,E5,DF,52
70 DATA 90,30,15,E1,11,00,02,19,D1,C1,0C,10,EE,C9,0E
80 DATA 41,16,02,C9,0E,C1,16,00,C9,3E,07,CD,5A,BB,ED
90 DATA 7B,4F,90,C9,00,00,84
100 MODE 2: CAT: INPUT"Filename (including extension) ";a$
110 a=1: a$=UPPER$(a$)
120 IF a$="*.*" THEN 270
130 WHILE 1: b$=MID$((a$),a,1): IF b$="." THEN 140 ELSE
    a=a+1: WEND
140 b$=LEFT$((a$),a-1): b=LEN(a$): c$=RIGHT$(a$,b-a)
150 b=LEN(b$):b$=b$+SPACE$(8-b):c=LEN(c$):c$=c$+SPACE$(3-c)
160 FOR a=1 TO LEN(b$): POKE &4F+a,ASC(MID$((b$),a,1)):NEXT
170 FOR a=1 TO LEN(c$): POKE &57+a,ASC(MID$((c$),a,1)):NEXT
180 |A: POKE &9051,&84: CALL &9000
190 PRINT: PRINT"Set ";a$;" to: "
200 PRINT: PRINT"1 ... Read/Write": PRINT"2 ... Read-only"
210 PRINT"3 ... Directory": PRINT"4 ... Hidden"
220 z$=INKEY$: IF z$="" THEN 220
230 PRINT: PRINT"Please wait..."
240 FOR t=&8001 TO &87E1 STEP &20
250 r=0: FOR s=0 TO 10: a=PEEK(t+s): b=PEEK(&50+s): IF a=b
    OR a-128=b OR a+128=b THEN NEXT ELSE r=1
260 GOSUB 290: NEXT: POKE &9051,&85: CALL &9000: GOTO 20
270 FOR t=&8001 TO &87E1 STEP &20: r=0: z$="1": GOSUB 290
280 z$="3":GOSUB 290:NEXT:POKE &9051,&85:CALL &9000:GOTO 20
290 IF r=0 AND z$="4" AND PEEK(t+9)<128 THEN c=PEEK(t+9):
    POKE t+9,c+128
300 IF r=0 AND z$="3" AND PEEK(t+9)>128 THEN c=PEEK(t+9):
    POKE t+9,c-128
310 IF r=0 AND z$="2" AND PEEK(t+8)<128 THEN c=PEEK(t+8):
    POKE t+8,c+128
320 IF r=0 AND z$="1" AND PEEK(t+8)>128 THEN c=PEEK(t+8):
    POKE t+8,c-128
330 RETURN
340 MODE 2: END
```

Spectram Utility

Regarding Ken Tyhurst's problem in AA 23: I too have seen the *Spectram Utility* advertised in a software catalogue. Called The Source 2, it is published by Software Mail Order Group Ltd, Jubilee Close, Townsend Lane, Kingsbury, NW9 8TZ. I phoned them on (0488) 84696, but got an answering machine. Anyway, after leaving a message I still haven't heard anything.

Roy Johns
Rossington, S Yorkshire

Thanks for the catalogue, Roy. I tried the phone number but also got an answering machine. And, like you, haven't heard anything after leaving a message. We'll try to get in touch with someone, so watch this space for more information when we get it.

■

I know of a similar utility sold here in the Netherlands. It is called *Multilink* and is produced by Filosoft, PO Box 1353, 9701 BJ, Groningen, The Netherlands. The telephone number (from the UK) is 010 31 50 13 7746.

Jaehee Lee
Capelle a/d Yssel, Netherlands

Many thanks for the information, Jaehee. A quick call to the Netherlands resulted in an interesting conversation with a Mr Menninga. Multilink is indeed a Spectrum-to-Amstrad program converter, but works only on 464 and 664 machines - he couldn't elaborate on anything else. Filosoft doesn't actually produce the product, just sells it. A German company is in fact behind Multilink. However, you can obtain the program from Filosoft at a reasonable price: around £5. It was originally £18, but as Mr Menninga explained: 'We just can't get rid of it over here.'

Can't save binary

I am having problems when trying to save a program as a binary file. I do not understand what **SAVE "filename", B, <startaddress>, <length>, <entrypoint>** means. What are start address, length and entry point?

Ryder Scott
Colchester, Essex

The Amstrad's memory starts at 0 and goes right up to 65535 (&FFFF) - that's 64 kilobytes. A machine-code program can be placed virtually anywhere in memory. For example, it could be located at 16384 (&4000) and could be 22 bytes in length. Just for argument's sake let's assume its start or execution address is 16390 (&4006). The Basic program below pokes a machine-code program into memory which starts at 16384, just happens to be 22 bytes in length and runs from 16390. Run the program and type **SAVE "code", B, 16384, 22, 16390.** *The parameters following the SAVE command simply tell the computer where the code is to be located, its length and where to call it from.*

```
10 DATA 4E,6F,20,75,73,65,CD,06,B9,21,00,00
20 DATA 7E,FE,20,38,03,CD,5A,BB,23,18,F5
30 FOR t=&4000 TO &4016: READ a$: POKE t,VAL("&"+a$): NEXT
```

You can run the machine-code program – which prints the Ascii characters held within the lower rom – by entering **RUN "code"**

You may like to try to save the screen: **SAVE "screen", B, 49152, 16384.** *Then to load it back:* **LOAD "screen", 49152**

Downloading is no joy

I have just mastered downloading files from Microlink, but am faced with another problem. The downloaded Basic program is in Ascii format. As you know, an Ascii file cannot simply be run like Basic files. How do I go about converting it to a Basic file? I tried loading it into Tasword and saving it again. For some reason I could list most of the program afterwards. Tasword accepts line statements of only 130 characters maximum: multiple statement lines usually get chopped. Help.

Daniel Berman
e-mail 72:MAG31343

We had no trouble at all running a program we downloaded from Microlink. First we loaded the captured file into a word-processor and eliminated sign-on messages and so on from it, re-saving just the actual program. Then into Basic, and load or run it. No problem. The only reason we can think of for your difficulty is line noise: odd characters will get chucked into the file. Try again.

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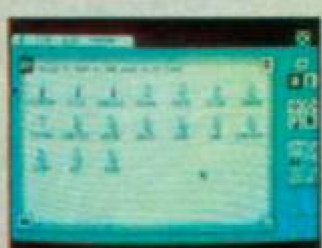
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HOT TIPS

Taming SID, a new use for Enter, seeing stars no more... these and more tricks revealed

Quote

Ever wondered how software companies manage to place quotes in a filename? For example, *Enduro Racer* when loading appears as "Enduro Racer". The way to achieve this is to type `SAVE CHR$(34)+"filename"+CHR$(34)`.

Alan Downes
Chester

Getting at Gauntlet

Do you want to get your name scrawled across the options pages of your disk version of *Gauntlet*? Yeah? Right, all you need is *Gauntlet* and a sector editor (*Oddjob* or *Discology* will do fine). Trundle off to track 39, sectors &14 and &15. You should see things like "Player One Choose" and "The Challenge Awaits". You can alter all these things, putting your own messages in place. Take care, however, not to change anything else as you may corrupt the disk.

Big Al
Solihull, W Midlands

Unwanted graphics

Here's a short routine for loading screens created using *Easiart* (by Microdraw), without all the unwanted graphics around the sides. The stars in line 100 should be replaced with the required colour values.

```
10 BORDER 0: INK 0,0: INK 1,0: INK 2,0: INK 3,0: MODE 1
20 LOAD"!filename",&C000
30 FOR y-400 TO 378 STEP -1: PLOT 0,y,0: DRAW 640,y: NEXT
40 FOR y=378 TO 0 STEP -1: PLOT 0,y,0: DRAW 6,y: NEXT
50 FOR y=378 TO 0 STEP -1: PLOT 553,y,0: DRAW 640,y: NEXT
60 FOR y-21 TO 0 STEP -1: PLOT 0,y,0: DRAW 640,y: NEXT
100 BORDER **: INK 0,**: INK 1,**: INK 2,**: INK 3,**
110 SAVE"!filename",b,&C000,&4000
```

Michael Pease
Norwich

Sorting out scanners

If you wish to scan part of a magazine or newspaper using the Dart Image Scanner, it can prove difficult if the paper has creases or folds. The obvious thing to do is iron the paper. However, if the paper insists on being a nuisance and getting entangled in the scanner head try using sticky tape to hold the paper in place.

Stephen Parkinson
Stoke Newington, London

Sign-on for CPM Plus

Users of CPM 2.2 can have a start-up message when they boot their system disk, thanks to Setup. CPM Plus has nothing to imitate this useful utility. However, after much hacking, I discovered a way to give CPM Plus system disks their own sign-on messages.

Insert a Plus system disk into the drive and type |CPM. Once you have the A> prompt insert your programming utilities disk and enter `SID B:C10CPM3.EMS` then wait until the SID message appears. Remove the utilities disk and insert your system disk once more. After a short pause you should see:

```
NEXT  MSIZE PC    END
6500  6500  0100  DAFF
```

To alter the sign-on message type S1168 and you should see: `1168 43`. This is the beginning of the start-up message. To insert a character at this location type an apostrophe followed by a character and ending with another apostrophe. You should end up with something like:

```
1168 43 'H'
```

Pressing Return will bring more numbers on the screen: `1169 43`. After each group of numbers appears on the screen you can enter the characters you wish, eventually building up a message. Your message can only go up to location 1792. If you alter anything after this you may corrupt CPM. To stop entering characters press the full stop and hit Return.

```
1168 43 'H'
1169 43 'E'
116A 43 'L'
116B 49 .
```

You should get a hash (#) prompt. Now type `F` (last address edited), `1192, 20`. "Last address" refers to the location at which you pressed the full stop. Finally type `WC10CPM3.EMS` and to see your message on the screen reboot CPM.

Cormac Gaughey
Cushendall, Co Antrim

SID, one of the utilities on the CPM Plus system disk, stands for Symbolic Instruction Debugger.

Messages from above

This may be useful to anyone who's had trouble trying to signal an error to Basic from machine-code or an RSX. Usually all that can be done is to print a message and return to Basic. But without a special protocol to poll for errors, Basic blunders on thinking all is well.

Within your machine-code routine you must jump to this sequence of instructions when an error occurs:

```
CD00B9   CALL &B900
3E64     LD A,100
C393CA   JP &CA93 (or JP &CB55 if you own a 6128)
```

This causes an error at the current Basic line. You can trap it using the instructions `10 ON ERROR GOTO` line or else a break ensues.

Andy Henderson
Gunville, Newport

Overwrite mode

Did you know that holding down Control and pressing Tab, while in Basic, puts you into overwrite mode? This is a toggle. Do it again and you're back to normal insert mode. This can be extremely useful when editing a line.

Stuart McSkimming
Hatfield, Herts

Stripy text

Here is a tip for getting stripy writing. Just type: `MODE 0: PEN 7: CALL &BBFF`.

Peter Featherstone
Leeds

One key

Fed up with the boring small Enter key? All it does is issue a carriage return. How about giving it some life? For example, `POKE 45906,140` causes the key to give the command `RUN"`. Or `POKE 45906,252` turns it into an escape key. Poke 45906 with a range of values for other interesting effects.

How about an invisible cursor? `POKE 45709,4` will do the trick. `POKE 45709,0` restores it to its former glory.

These pokes work only on 464 machines.

J Curley
Scotland

Screen converter

The routine below loads in a compacted screen image saved by the Multiface II, and allows you to save it out again in standard form. This means you can use the pictures within Art Studio and other art packages.

```
10 MODE 2: PRINT"SELECT:"
20 PRINT: PRINT"1. LOAD AND VIEW A SCREEN"
30 PRINT: PRINT"2. LOAD AND SAVE AS A UNCOMPRESED SCREEN"
40 PRINT: PRINT"3. CATALOGUE DISK"
50 PRINT: PRINT"4. END AND GO TO BASIC"
60 A$=INKEY$
70 IF A$="1" THEN GOTO 120
80 IF A$="2" THEN GOTO 170
90 IF A$="3" THEN GOTO 270
100 IF A$="4" THEN NEW
110 GOTO 60
120 CLS: CAT
130 INPUT"ENTER NAME OF SCREEN";a$
140 MEMORY 16383: LOAD A$: CALL 32768
150 FOR w=1 TO 2000: NEXT w
160 FOR w=1 TO 100: PRINT: NEXT w: RUN
170 CLS: CAT
180 INPUT"ENTER NAME OF SCREEN TO LOAD ";a$
190 PRINT"ENTER NAME OF SCREEN TO SAVE ";b$
200 MEMORY 16383: LOAD A$: CALL 32768
210 a$=INKEY$
220 IF INKEY$="" THEN GOTO 220
230 SAVE B$,b,&C000,&4000
240 PRINT"OPERATION COMPLETE"
250 FOR W=1 TO 100: NEXT W
260 FOR w=1 TO 100: PRINT: NEXT w: RUN
270 CLS: CAT
280 A$=INKEY$
290 IF A$="" THEN GOTO 290
300 RUN
```

Mark Ralph
Barrow in Furness

Mouse drawing

I own both *Melbourne Draw* and *AMX Art*. Each drawing package does have its advantages and disadvantages: it isn't unreasonable to expect to be able to draw different stages of a screen using the two packages. However, there is a problem: *Melbourne Draw* creates a 17k binary file, whereas *AMX Art* sets up a 12k Ascii file. I have written a routine that converts a standard screen or one produced from *Melbourne Draw* to a 12k file. The AMX package contains an option to do the opposite.



```
1 ' AMX Art screen format creator
2 ' by Philip Butler
3 ' Amstrad Action    October 87
10 MEMORY 19999: FOR t=20000 TO 20054
20 READ a$: a=VAL("&"+a$): POKE t,a: NEXT t
30 MODE 1: PRINT"*** AMX ART SCREEN FORMAT CREATOR ***"
40 PRINT: INPUT "FILENAME TO BE SAVED ";a$
50 aa=LEN(a$): IF aa>8 or aa<1 THEN 70
60 FOR t=1 to aa: POKE t+16766,ASC(MID$(a$,t,1)): NEXT t
70 POKE 20001,aa: PRINT: INPUT "FILE TO BE LOADED ";f$
80 PRINT: INPUT "PEN 2 COLOUR (0-26) ";d
90 PRINT: INPUT "PEN 3 COLOUR (0-26) ";c
100 IF d>26 or c>26 or d<0 or c<0 THEN 80
110 POKE 20042,d: POKE 20047,c: MODE 1: LOAD f$,&C000
120 CALL 20000: END
130 DATA 06,04,21,7f,41,11,e9,05,cd,8c,bc,11,12,00,19,36
140 DATA ff,21,a6,c0,06,b0,e5,0e,44,7e,e5,cd,95,bc,e1,23
150 DATA 0d,20,f6,e1,cd,26,bc,10,ed,3e,05,cd,95,bc,3e,06
160 DATA cd,95,bc,cd,8f,bc,c9
```

Philip Butler
Barry, S Glamorgan

HACKERS ONLY

The section that brings the CPC's darkest secrets to light. If you don't understand what's written here, bad luck. You'll get no explanation, for this is where the hackers hang out.

Using bank two

Last issue **Phil Howard** expained several techniques for getting past protection systems. This month we look at an alternative method of hacking into programs.

Many of the latest cassette-based titles start loading from the top of memory (`&FFFF`) and continue through to low memory (`&1000` or lower). Others start at `&100` and move down past zero and continue through `&FFFF`. When the program has finished loading you end up with a dead computer: interrupts disabled, firmware and RST area overwritten. In most cases it is impossible to re-inititialize the computer as areas of the program may get corrupted, or there isn't any spare memory for you to insert a routine. The simplest answer - if you own a 6128 or expanded 464 - is to load the program into the second memory bank. Once loaded you can soft-reset your Amstrad: the second bank only loses information when the computer is powered down.

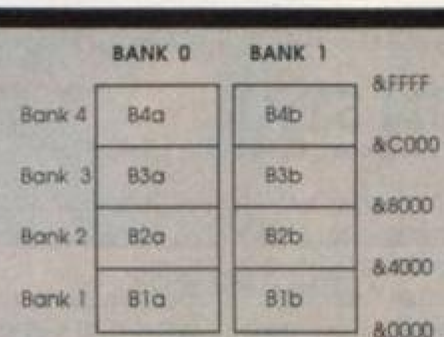
There are a few hitches when trying to use the secound bank: neither RST area, firmware, or systems variables are present. These must be copied over:

```
ORG &9000

LD BC,&7FC4     ;Switch in first
OUT (C),C       ;block of 2nd 64k
LD HL,0
LD DE,&4000     ;Move contents of
LD BC,&4000     ;1st block of 64k
LDIR            ;to &4000
LD BC,&7FC6     ;Switch in 3rd
OUT (C),C       ;block of 2nd 64k
LD HL,&8000
LD DE,&4000     ;Move contents of
LD BC,&4000     ;3rd block of 1st
LDIR            ;64k to &4000
LD BC,&7FC0     ;Return 1st 64k
OUT (C),C       ;bank to normal
RET
```

Configuring banks

Memory is partitioned into blocks of 16k ram. Four blocks of ram make up a bank of 64k ram. In the 6128 and expanded manchines exists two banks of 64k. By sending values to the Gate Array (accessed on port &7F00) 16k blocks can be switched in and out of the current bank.



The diagram demonstrates how memory is partitioned. The table shows what happens when certain values are sent to the Gate Array.

Value	Effect
&C0	Bank 0 selected
&C2	Bank 1 selected
&C4	B2a and B1b swapped
&C5	B2a and B2b swapped
&C6	B2a and B3b swapped
&C7	B2a and B4b swapped

Swapping over

Use the assembly listing to copy the contents of bank 0 to bank 1. An `OUT &7F00,&C2` (`LD BC,&7FC2; OUT (C),C`) will activate bank 1. Unfortunately you won't see anything as the operating system still outputs to the screen memory in bank 0: you'll have to be acurate when typing instructions to load programs.

Once the program has loaded and you have reset the machine, use a similar method to move the contents of bank 1 to bank 0 - one block at a time - and then save them. Finally, get hacking.

ACTION TEST

This month sees Gary Barrett taking over most of the reviewing duties, ably assisted by Chris Boothman (CJB). From time to time Bob will also be doing reviews, so rest assured he isn't hanging up his joystick completely.

This month there was a real tussle for *Mastergame* and *Wizball* came out on top due to its original ideas and tremendously addictive gameplay. *Renegade* came a close second and takes over the mantle of the ultimate combat game.

There's lots of other juicy stuff around as well: *Cholo* - a vector graphic game trying to follow in *Elite*'s exhaust trail, *Mask* - a cartoon licence that isn't just for kids, *Paperboy* - the long awaited arcade conversion, and *Mission Genocide* - the smoothest scrolling shoot-em-up on the Amstrad.

CENTURIONS

Ariolasoft, £9.99 cass, £14.99 disk, joystick or keys

Yet another game based on a cartoon series has arrived for the Amstrad. Doc Terror has attacked the Centurions Weapon Development Centre in an attempt to seize the experimental Tyron-Dichromate. The earth is in danger of being destroyed, so the team in the Exoframes must stop him from getting the chemical.

The game consists of three large scrolling landscapes which are inhabited by a variety of aliens. At the start of the game you can choose which of the levels to start on. To travel between levels you need to find the six parts of a master key. You can control either a droid or one of the three Centurions: Ace for use in the air, Max for use in the sea, and Jake for use on land. In the two player game each player controls a different Centurion.

When several of the same type of alien have been shot a quant is deposited on screen which can be picked up so that a weapons pack is sent to you. There are eight types of weapon, each has its own benefits and some can have disadvantages, like the ring weapon which can end up killing the Centurion that's using it.

The playing area is very large and to get around it you have to use the Centurions in the right combination. This means there's a lot of exploring to do and many aliens to shoot while doing it. Many keys have to be found in order to progress through the landscape mazes to find the six parts of the master key.

The basic game concept doesn't hold many surprises, the most interesting thing being the different weapons you can use. The large playing area will certainly provide a lasting challenge but you may find the lack of variety in the gameplay rather tedious. **GB**

FIRST DAY TARGET SCORE
Find a piece of the master key

The Verdict

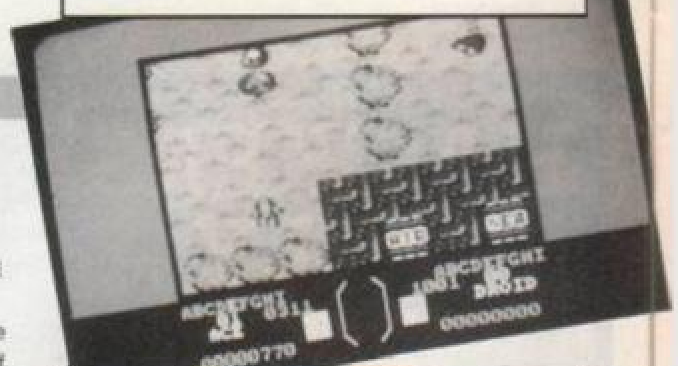
GRAPHICS **68%**
- □ Smooth multi-directional scrolling.
- ■ Sprites seem a little small and chunky.

SONICS **42%**
- ■ Awful, monotonous tune.

GRAB FACTOR **69%**
- □ Various weapons to use.
- ■ Gameplay is boring, just lots of wandering around.

STAYING POWER **64%**
- □ Large playing area.
- ■ But only three levels.

AA RATING **68%**
- ■ Not quite what it could have been.



SUN STAR

CRL, £9.95 cass, £14.95 disk, joystick only

A very boring space game with little action and mostly block graphics. But don't let me decide for you. Read on McDuff.

The Xxarion Star Corporation placed its first solar energy grid in orbit around the sun. The grid uses the sun's energy to form crystals which allow inter-stellar travel at light speed. There are now sixteen of these energy grids orbitting the suns of the universe. Your job is to recover as many of the crystals as you can. Obviously a tough task which will need almost superhuman strength and powers of concentration.

The screen is split into two halves. The top half shows you the view from the front of your ship, the bottom half shows you your energy levels and the number of crystals collected.

The view is of a perspective grid, with the squares filled in in different colours. A blue colour indicates a grid wall, a yellow square indicates an obstruction, and a red one indicates an energy pulse. All of which must be avoided. A white square is a disrupter pulse, which you must shoot at until it disappears, leaving a green crystal square behind it. There are four of these disrupter pulses to shoot. Once you have collected ten crystals you must find the orange hyperwarp cell.

If you are still interested, I think this game is boring beyond the line of duty. The speed of movement is fast but the control of the ship is very confusing. The sound? What? Had I not been cajoled into it, I would'nt have passed the grab factor stage on this one. Extremely disappointing. **CJB**

FIRST DAY TARGET SCORE
2,000

SECOND OPINION

There was a good idea for a game here but the uninspiring presentation and awkward controls result in it being less than fascinating. If a more complicated strategy element had been built in it might have worked, but as a straight up arcade game it doesn't. Back to the drawing board ofr this one methinks. **BW**

GREEN SCREEN VIEW

Colours are distinguishable but not easily.

The Verdict

GRAPHICS **44%**
- □ Quite colourful.
- ■ Reminds me of Connect Four on a slant.

SONICS **37%**
- ■ Say what?

GRAB FACTOR **27%**
- □ Lots of areas to play in.
- ■ The controls confuse you alot.

STAYING POWER **22%**
- ■ No more than a space dodgems game.
- ■ No variation in the action.

AA RATING **27%**
- ■ An idea that didn't work.

CONVOY RAIDER

Gremlin Graphics, £9.99 cass, £14.99 disk, joystick or keys

This is basically a *Beach-Head* clone with some small alterations made to try to improve it. You are in command of a ship which is to patrol the inner sea. We aren't told whose inner sea it is, but it sure is packed with a lot of nasty surprises.

The main screen shows a three way radar screen which tracks air, sea and underwater. The enemy forces consist of ships, planes and submarines. When enemies are attacking you, a flashing square on one of the radar screens indicates where the attack is coming from. Across the top of the screen are four icons: map, sea wolf, exocet and sonar. The map is used to guide your ship around the inland sea so that you can seek and destroy the invaders. Damage inflicted to your ship can be repaired at one of the ports shown on the map.

Your ship is equipped with the latest in weapon technology which includes seawolf sea to air missiles, exocet anti-shipping missiles (as used to destroy HMS Sheffield) and anti-submarine helicopters. The sea wolf missiles are fired at incoming aircraft or anti-ship missiles. The exocet are used to sink enemy shipping and the sonar allows you to control the helicopter and sink submarines. When an attack is over you return to the main screen and continue hunting the enemy.

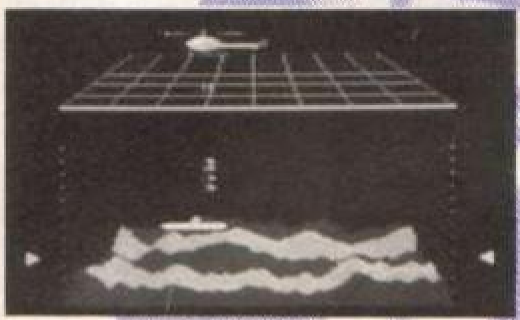
The sound effects are rather irritating and consist of radar pings and explosions. The icons are clearly defined and easily selected. The background scenes look good and colour is used well on them. The similarities to Beach-Head are in the gameplay since the graphics are far superior in *Convoy Raider*. If you already have *Beach-Head* or didn't like it then don't bother buying this, but if you haven't got it and want a shoot-em-up with a minor amount of strategy in finding your enemy, then this is a reasonable option. **GB**

SECOND OPINION

I didn't care for this at all, it's Gremlin's worst game for a long while. It's a group of old hat ideas cobbled into a game that has very little going for it. The only part I enjoyed was the graphic sequence where the helicopter drops depth charges on a submarine. Apart from that it's very disappointing. **BW**

GREEN SCREEN VIEW

Tricky identifying activated icon but otherwise okay.



Depth charging a submarine from your helicopter

FIRST DAY TARGET SCORE

Score 30,000

The Verdict

GRAPHICS **67%**
- □ Enemy subs and helicopters are well defined.
- ■ Radar screens and maps are simple and unattractive.

SONICS **31%**
- ■ No tunes just annoying effects.

GRAB FACTOR **63%**
- □ Variety of weapons systems.
- ■ Not much to think about.

STAYING POWER **48%**
- □ Difficult to destroy all the enemy.
- ■ Gets very repetitive and boring.

AA RATING **55%**
- ■ Adds little to old games like *Beach-Head*.

HYBRID

Starlight/Ariolasoft, £9.99 cass, £14.99 disk, joystick or keys

In a prison complex not so far away are some aliens. They hate humanity and have been locked away for a long time. In that time they have developed so that they are again a threat to the State. A team of three Hybrids have been sent to the complex to wipe out the aliens for good. The problem is that the prison was designed to stop rescue attempts and so the defences are turned on the Hybrids.

The hybrids are a mixture of droid and organic material. The three are called Brain, Robot and Xylon and have different strengths and weaknesses. The Brain is weak in combat but is the only one that can teleport itself and the other hybrids by using teleport keys. The Robot is the main combat hybrid with high weapon power and strong armour. It can be used to disable the weapon emplacements which are scattered about the complex. The Xylon is lower in armour and firepower than the Robot but stronger than the Brain. It is the only one that can switch on bridges in the complex.

The three hybrids start the game with five energy cartridges each and these are used up by collisions with the aliens and by being shot. Scattered about the base are several letters. Picking these up gives one of three effects. E is energy which restores one cartridge of energy. F increases the firepower of the hybrid and A increases the armour rating. Hybrids can also trade energy because after a while it runs out.

By entering a cell all three hybrids can be linked together. They are then teleported to a chamber with an alien in it. There are four aliens to be destroyed which is not an easy task.

The graphics are quite large and reasonably animated but the use of colour is uninspiring. The sound effects are feeble bleeps and pings and the tune is rubbish. The game is quite demanding and the need to use all three hybrids provides variety. Not a classic but should give a few hours entertainment. **GB**

SECOND OPINION

Whoever wrote the instructions nearly turned a decent game into a disaster area. It's all very well to expect the player to work out some things for himself but these instructions don't give you any help at all. Once you've found out what you're doing it's quite interesting but you may get frustrated long before that. **BW**

GREEN SCREEN VIEW

Good clear graphics mean no problems.

FIRST DAY TARGET SCORE

Destroy an alien.

The Verdict

GRAPHICS **76%**
- □ Clear, detailed graphics.
- ■ Poor use of colour.

SONICS **38%**
- ■ Don't turn the music on!

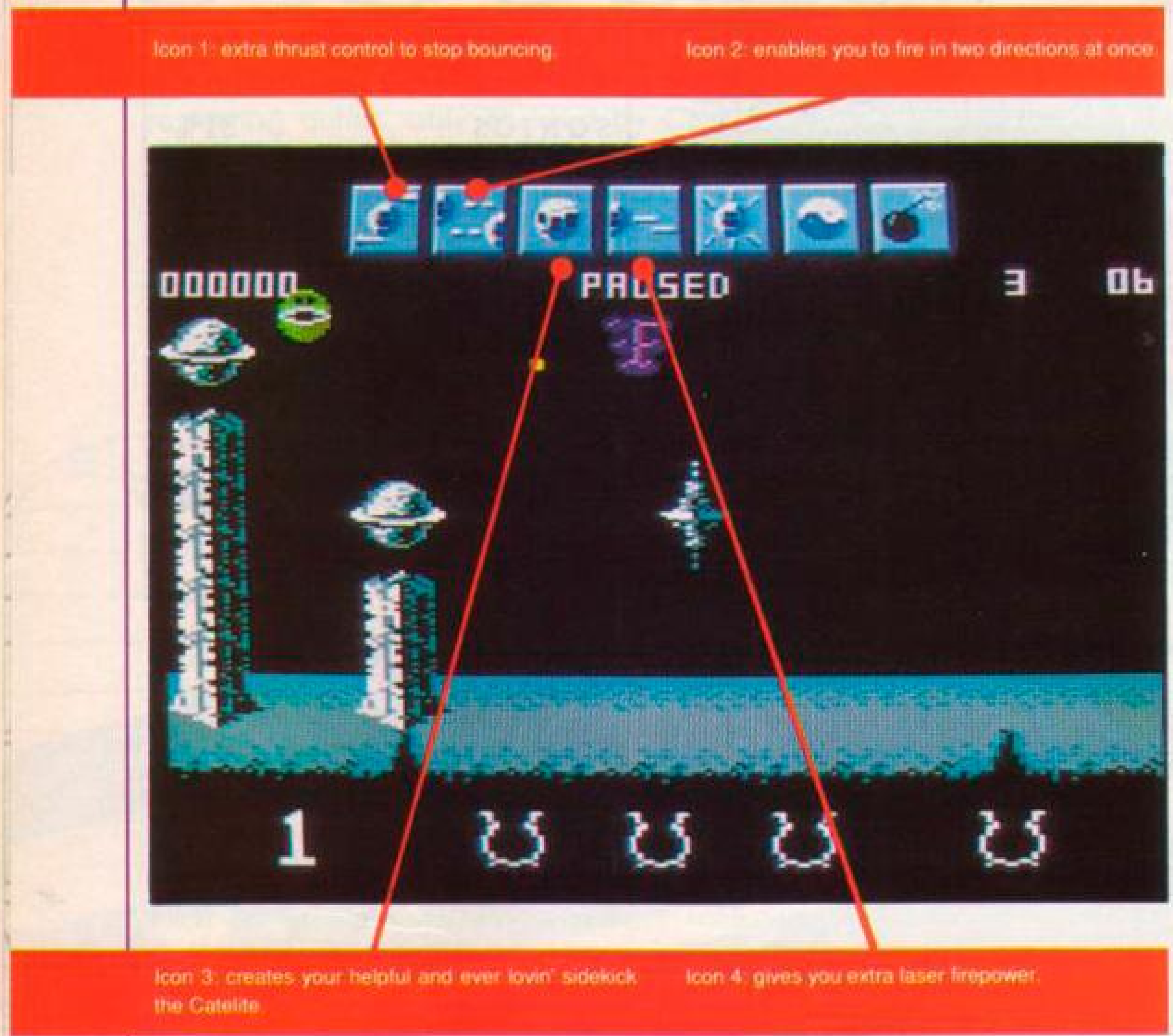
GRAB FACTOR **58%**
- □ Three hybrids with different abilities add variety.
- ■ Very confusing due to poor instructions.

STAYING POWER **67%**
- □ Once you know what you are doing it's interesting.
- ■ Only four aliens to destroy.

AA RATING **64%**
- ■ Just lacks that certain something.

WIZBALL

Ocean, £8.95 cass, £14.95 disk, joystick or keys



Wiz's Guide to Wizworld

Purple static alien: when shot these turn into a green pearl.

Green pearl: collect these to move the icon selector.

Orange spinning alien: move randomly shooting wildly at you.

Purple flying alien: fly across the top of the screen shooting downwards.

Blue droplets: appear on level one and fill up the right hand cauldron.

Green droplets: appear on level two and fill up the middle cauldron.

Red droplets: appear on level three and fill up the left cauldorn.

White droplets: give you extra lives when caught by Catelite.

Pink droplets: make Catelite go berserk and eventually disappear.

Dark Blue droplets: brings on a "filth raid" - aliens that fly rapidly around the screen shooting at you.

Black droplets: turns out the lights so you have to play in the dark until you've shot enough aliens.

Grey droplets: Catelite becomes indestructable.

We're off to see the wizard...

The evil Zark and his sprites have invaded Wizworld in an attempt to eliminate the spectrum (not the computer unfortunately), and make the world drab and grey (boo hiss). It is up to Wiz, his Wizball and servant Catelite, to save Wizworld (behind you!). Enough of the pantomime, what about the game...

Wizworld is split into six horizontal levels connected by tubes and craters in the floor. Perversely, some of these down tubes will take you up to a higher level. The game is of the flick screen variety where leaving from one side of the screen leads into the next room, where as yet unknown dangers await you. You control the Wizball, which to start with can only move by bouncing and has limited shooting power, but can soon become more skilled.

Each screen has one of three types of object in store for you: aliens which shoot at you, purple symbols that change into green pearls when shot and drops of liquid that bounce up and down the screen. The aliens have to be shot and when this is done, the next time you enter that screen, you'll find some drops of liquid or a group of four purple symbols. The aliens come in two basic types and you'll quickly discover the best methods for dealing with them.

The most important icon is the third, which creates Catelite. This appears as a sidekick to Wizball and can be controlled while holding down the fire button. Catelite is needed to collect the small droplets of liquid which are produced when the larger drops are shot.

SECOND OPINION

At first I had a sinking feeling as the scenery appeared and it looked like a lousy conversion. Then after playing for a while you realise the drabness is intentional and it's up to you to produce a colourful game - novel twist that. The gameplay is delightful and once you know what you're doing it's very challenging. This is one of my favourites and I'll be trying to crack it for a long time. **BW**

GREEN SCREEN VIEW

Spotting bad coloured droplets is awkward but generally playable.

Beware though, because not all of the droplets are to be collected. If the droplet is a different colour from that of the parent drop then take care. It can produce nasty effects like turning all the lights off, so you have to play in the dark, or sending your Catelite loopy so that you have to get another one.

Each of the correctly coloured droplets collected adds to the contents of three cauldrons at the bottom of the screen, and also alters the contents of the right hand cauldron which is the target colour for that level. When the target colour cauldron is filled you must travel down one of the many holes in the ground and you will be onto a bonus screen. After the bonus screen you enter Wizlab, where you can give all future Wizballs a weapon or control power. After Wizlab the game continues, but this time part of the scenery is coloured in. You then continue the

MASTER GAME

The Verdict

GRAPHICS 88%

- ☐ Colourful, well designed sprites.
- ☐ Detailed scenery that colours in as you complete the game.

SONICS 68%

- ☐ Good sound effects...
- ■ but no tunes.

GRAB FACTOR 94%

- ☐ Great idea for returning colour by collecting droplets.
- ☐ Icons and powers combine well within the game.
- ■ Instructions aren't very helpful.

STAYING POWER 90%

- ☐ Will take a long time get all the colours.
- ☐ You've got to be alert every time you enter a screen.

AA RATING 92%

- ☐ Good combination of old and original ideas.
- ☐ Did we mention it was cute too?

task of restoring colour to Wizworld by collecting another colour.

When collected the green pearls will move a selector along a row of seven icons at the top of the screen. To activate the icon you waggle the joystick in Decathlon style until the icon stops flashing. This weird way of activating icons is made annoying by the fact that the instructions don't tell you you have to waggle, but say you've got to press the space bar. By collecting the pearls and activating the different icons you alter the combat and movement characteristics of your Wizball. Some of the more useful icons are the thrust icon, which gives you more control over the ball by giving it up/down and left/right control rather than bouncing, and the shield icon which stops you from being killed for a while.

The scenery isn't very colourful to start with, but that's because it's filled in as you progress through the game. What they do have is plenty of detail, each level having a different type of scenery. There are no musical tunes, but the sound effects are good.

At first the game is a bit confusing but after a few games you begin to pick up what is going on. The gameplay has a certain addictive quality which makes you want to play just one more game to try to fill those cauldrons and bring back more colour. There are lots of original elements that make it a joy to play, and for once a silly scenario is actually justified by the fantasy world the game plunges you into. GB

FIRST DAY TARGET SCORE
Get to Wizlab once

Icon 5: gives a spray gun that blasts bullets everywhere.

Icon 6: a valuable shield that makes you invulnerable for a time.



This indicates the level you're on

Target cauldron showing the colour you need to collect

Icon 7: a smart bomb that kills every sprite in sight.



Tube down to level three

Cauldrons in which you collect colour

Tube to take you to another level



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CATCH 23

Martech, £8.95 cass, £13.95 disk, joystick or keys

A futuristic arcade adventure western from Martech, utilising quickly drawn vector graphics and one nice picture of a man who varies in size in relation to his proximity. *(OK, who gave Chris a dictionary for his birthday? - Ed)*

You have just been dropped by parachute on to a top secret island. The nearest mainland is 400 miles away. The island is being used as a test developement site for the revolutionary CK23 orbital interceptor. Your mission is to sneak into the secret military complex and steal the plans for CK23. You must then blow a nuclear reactor up.

SECOND OPINION

Unfortunately the twin effects of seeing Mercenary *in the past and the impending game* Driller, *which features solid 3D graphics, tend to make this look dated. It's reasonably well implemented and will provide quite a test but there didn't seem much to get excited about. Six months to a year ago I'd have been more enthusiastic, but now it just seems run of the mill stuff.* **BW**

GREEN SCREEN VIEW

Perfectly visible in green.

The screen shows a "your eye" view as you roam the planet. Buildings are drawn in 3D vector graphics and you can enter them by "investigating" the door. To investigate anything you press I for investigation mode. A magnifying glass appears on the screen. Position it over the thing you wish to investigate and then press fire. A message will appear on screen to tell you about it.

Once inside a building the internal furniture, such as chairs, tables, shelves, will be drawn. These too can be investigated. While inside you cannot be attacked by armed guards, so this is a good method of avoiding trouble. There are shuttles around the planet which you can jump onto to make your journey faster.

When there is a guard within firing distance of you a sight will appear on the screen. You must quickly move this over the chest area of the guard and press fire. If you shoot him in time his body will crumple to the floor. If not, the screen will show his bullet holes as he pumps you full of lead.

The task is difficult and the playing area massive. The graphics on this game are drawn quickly and well. The opponent in the "shoot out" is intricate. There are only two colours used, hardly surprising when using vector graphics. The sound is nothing without the gunshots. **CJB**

FIRST DAY TARGET SCORE

Riddle a few men with holes.

The Verdict

GRAPHICS 68%
- □ Good character definition.
- ■ Only two colours used.

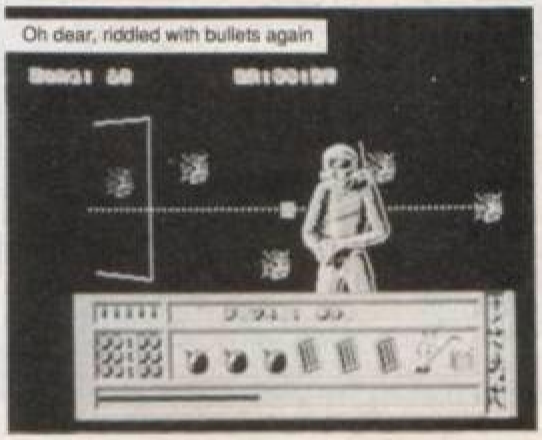
SONICS 69%
- □ Nice shooting sound effects.

GRAB FACTOR 64%
- □ Exciting head to head gun fight.
- ■ No turning while moving forward.

STAYING POWER 76%
- □ Massive playing area.
- □ Searching the inside of buildings is a good addition.

AA RATING 73%
- □ Tense and difficult path to success.

Oh dear, riddled with bullets again



DEATH WISH III

Gremlin Graphics, £9.99 cass, £14.99 disk, joystick or keys

Take on the role of Charles Bronson in the game of the film sequel to the sequel of the film Death Wish. Follow that? No, well just you wait till the game Death Wish XVI comes out. The streets of New York are full of rioters. Being a public minded chap you arm yourself to the teeth with a variety of weapons with which to kill them all.

The Verdict

GRAPHICS 71%
- □ Well animated deaths if you care for them.
- □ Streets and house interiors are nicely drawn.

SONICS 68%
- □ Reasonable tune.

GRAB FACTOR 38%
- □ To start with it has its funny (absurd) side.
- ■ You may be appalled by the casual violence.

STAYING POWER 25%
- ■ Very boring just killing one person after another.
- ■ No incentive to keep playing.

AA RATING 30%
- ■ The worst sort of game - boring and in bad taste.

SECOND OPINION

I'm not going to be outraged by the ridiculous level of violence in the game, doubtless many of you will. What does annoy me is that the game is extremely boring. You just wander around shooting people and there's not much incentive to make sure you shoot the right ones. After just a few minutes of turning people into piles of bloody flesh you'll be turning off. Gremlin will probably take so much flak for this one that they'll need their own bullet proof vests. Two words sum this game up - mindless, pathetic. **BW**

GREEN SCREEN VIEW

Unfortunately you'll have a clear view of lots of green blood.

The screen is split into two main parts. The top shows your view of the streets with rioters, police, old ladies and prostitutes wandering along them. Below this is a status area which shows your score, injury, map, bullet proof vest, weapon type and ammunition. Your score can be positive or negative depending on how many innocent bystanders you have slaughtered. Injury increases from hits you take and your bullet proof vest gets bloodstained as you are shot.



One of your victims explodes after being hit by the rocket launcher

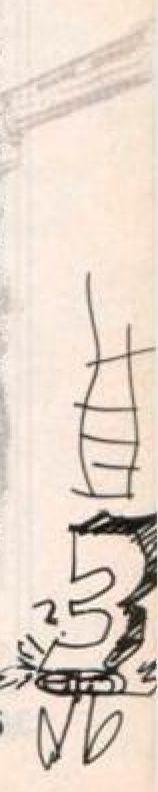
There are four types of weapon which are a magnum (not the champagne variety), shotgun, machine gun and rocket launcher. The weapons have different effects on who ever is hit by them. The rocket launcher explodes people into a bloody explosion, the machine gun makes them dance off the screen, the shotgun and pistol blow holes in peoples backs. They all have a limit to the ammunition which they hold and empty weapons are discarded. The map has two modes of operation which are coded yellow and blue. Blue shows you where to find weapons and yellow shows the location of gang leaders, your main targets.

The animation is simple and the movement of the characters is jerky. The sound is limited to gunfire and a tune, which isn't very good. Not really worth the effort. **GB**

FIRST DAY TARGET SCORE

10,000 (+ or -)

Dem bones, dem bones... dem bloody bones



MASK

Gremlin Graphics, £9.99 cass, £14.99 disk, joystick or keys

Cartoon series seem to be prime targets for converting into games at the moment. In this one the forces of MASK, under your leadership as Matt Trakker, are fighting VENOM (Vicious Evil Network Of Mayhem). A surprise attack on the Mask base with Venom's latest weapon, has thrown the forces of Mask through a time vortex. Fortunately, and conveniently for the scriptwriters, you were out at the time and now have to rescue your helpless colleagues.

The team are scattered through four different time zones which are linked by the vortex. In each time zone there are two members of Mask except the first in which you only have to rescue one.

The game's zones are smooth scrolling landscapes made up of many screens. You drive around in a car called Thunder Hawk, which is a little difficult to control until you get used to the way it drifts about.

Each agent has to be located using a scanner, which is activated by a special key in the form of a letter. The letter has to be assembled from four pieces of key littered about each landscape. There are many pieces but only four will fit together correctly.

Once the scanner is working you just follow the directions of the scanner to locate the agent and pick him up. The agents "mask", which turns them from ordinary mortals into cartoon superheroes, must then be collected. When the level is completed you must return to the vortex and pass through it.

SECOND OPINION

It's nice to find a game where features from the cartoon have been built in, rather than a cartoon in which they've tried to build in a game. The graphics are well worked and all the zones look good. I enjoyed the mixture of shoot-em-up, exploring and puzzling, although it's quite tough. A difficult task that's addictive as well. **BW**

GREEN SCREEN VIEW

All the zones play well in green.

Littered about the landscape are scanners, bombs, repair kits, masks and security keys. The bombs can be used to blast holes through obstacles and can also destroy enemies. Watch out though because you can be destroyed by your own bombs. If Thunder Hawk takes too much damage then the game ends, but the damage can be repaired by driving over the repair kits.

The four zones are Boulder Hill, Pre-Historic, Far Future and Venom base. They are full of dangers ranging from rock dropping pterodactyls in Pre-Historic to UFO's in the Far Future. The hazards are many and vary in their behaviour, so you've constantly got to be alert to the danger. Particularly impressive are the trains and helicopters that are great fun to blow up.

The game is completed when all Mask agents have been rescued and the Venom base destroyed. This has to be done within a time limit, which is reduced sharply every time you get blown up.

Sound in the game is only spot effects like explosions and laser fire. There's a loading

The Verdict

GRAPHICS 88%
- □ Smooth multidirectional scrolling.
- □ Colourful landscapes and characters.

SONICS 53%
- □ Good title tune.
- ■ Feeble sound effects.

GRAB FACTOR 83%
- □ Lots of blasting right from the start.
- ■ Controlling the car is awkward at first.

STAYING POWER 88%
- □ Zones are tough to complete.
- □ Letter keys add a puzzle element.
- ■ Frustrating to lose keys when you die.

AA RATING 86%
- □ A well worked cartoon licence.

PAPERBOY

Elite, £8.95 cass, £14.95 disk, joystick or keys

Elite, the original masters of the arcade conversion, have finally produced an Amstrad version of this massive arcade hit. It's been immensely popular on other machines and shows every sign of dominating the Amstrad charts as well. Your task as the paperboy is to deliver papers to your subscribers in the streets of America *(that's a lot of streets - ed)*.

You climb on your bike, pull on your cap and with a bag of papers set off into the suburbs of America to deliver the news. Your route is fraught with dangers which can knock you off your bike, and if you don't deliver well enough you'll lose your subscribers and your job.

SECOND OPINION

It's been a long wait for this conversion but they've definitely come up with the goods. The lack of sound is disappointing, but the most important thing is the gameplay and that's there in plenty. There's the thorny issue of repetitiveness but I think it's got the right level of difficulty and variety to keep most players happy. I've never played the arcade version or any other and I thoroughly enjoyed it. **BW**

GREEN SCREEN VIEW

The streets are clear in green.

The screen shows you pedalling your bike along the street with the houses scrolling diagonally towards you, top right to bottom left. The game is divided into two stages, the first is the paper run and the second is the practice track which your employer has thoughtfully provided according to the instructions. It's like the editor providing me with extra games to review at home!

The Verdict

GRAPHICS 80%
- □ Lots of colourful backgrounds and characters.
- □ Slightly jerky scrolling.

SONICS 00%
- ■ Not a sausage, John.

GRAB FACTOR 84%
- □ Good variety of features to cope with.
- □ The practice track adds a nice element.

STAYING POWER 78%
- □ Route gets more difficult as hazards are added.
- ■ Only one delivery route.

AA RATING 81%
- □ Good arcade conversion and no game like it on the Amstrad.

In the paper run you ride along the street throwing papers into the mail box or at the door of the house. More points are scored for getting them into the mail box. Missing a house with a paper or throwing it into a window or other object results in losing that house as a subscriber.

There are two sorts of hazard in the street, static and moving. The static hazards are things like fences, walls, grids and kerbs. Collision with these causes you sprawl all over the place and lose one of your five lives. There's a reasonably easy route around all of these, but it's complicated by the moving hazards that also interfere.

There are lots of moving hazards including: cars, skateboarders, workmen, drunks, Sinclair C5's and tyres. Most of the objects and people can be hit with newspapers for bonus points. You can knock people over or cause things to explode, but be careful not to waste too many papers. Points are also scored for breaking windows or hitting the dustbins in the houses of non-subscribers. You can even hit the gravestones in the churchyard. If you manage to do a perfect run (delivering to all of your subscribers) then you regain a subscriber. When you've got a lot of subscribers you'll run short of papers so you've got to collect piles of papers to keep up your supply.

The second part of the game is the practice track where you have a time limit in which

screen which has a pleasant musical tune before the rest of the game loads.

As cartoon licences go this is about the best you can expect. It works in features of the cartoon to make an enjoyable and testing challenge. The colourful graphics and shoot-em-up action are initially attractive and when combined with the key puzzles and searching, will keep you hooked. The only major annoyance is that when you die you lose all the key pieces and have to start from scratch. A well produced game that should appeal to hardened gameplayers and fans of the cartoon alike. **GB**

FIRST DAY TARGET SCORE
Complete level one



Thunder Hawk starts the battle at Boulder Hill



Pre-Historic nightmare as the dinosaurs attack

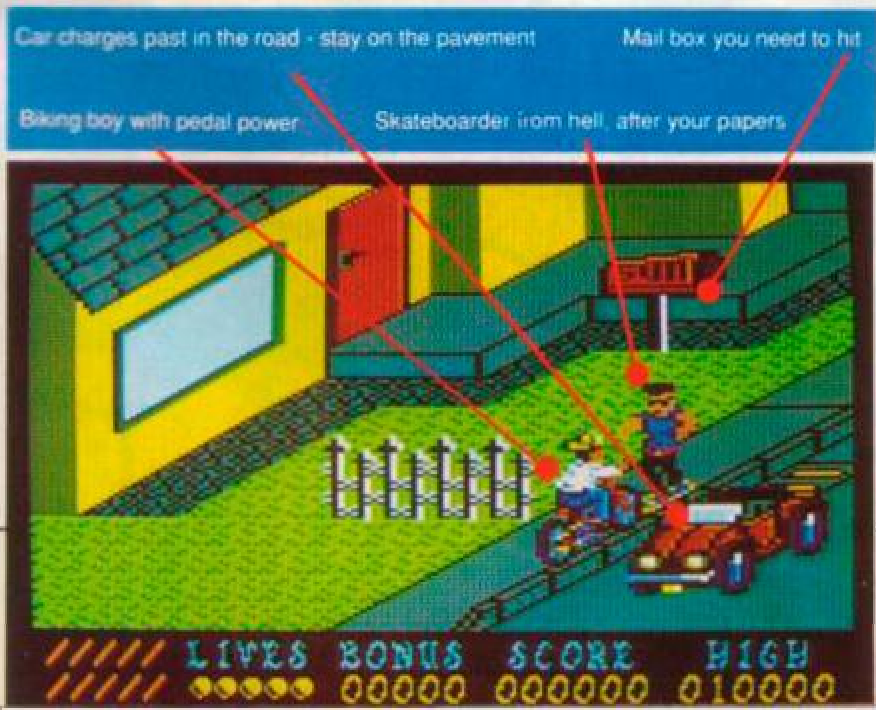
you can gain valuable bonus points. You have to jump over ramps and throw papers at targets while avoiding the walls and water ditches across the course. Crashing on the practice track doesn't lose a life but it does exit you from the track. A bit of careful riding will take you to the finish giving a higher bonus. After the practice track there's your daily report which informs you of any loss or gain of subscribers by showing your route. If you can memorise this it will make economising on papers much easier on the next run because you'll know where not to deliver and where to attack people.

The game then cycles round to paper delivery again with things getting a little more difficult. The second time around lawnmowers and radio controlled cars appear. Burglars and house owners appear later as you progress further into the game.

The first thing you'll notice when this game loads is the silence. There is no sound at all which is due to lack of memory according to Elite. Perhaps a hacker out there could produce a routine to give sound using the extra memory on the 6128 - we'd love to print it. The scrolling of the screen is a bit jerky but this is only a minor problem because there's good use of colour with bright and clear scenery. The inhabitants of suburban America may be a little chunky but they are detailed enough and come in plenty of interesting varieties.

The game plays well and although it's a little repetitive it has something basically addictive about it that hooks you. Lack of sound is a bit disappointing so you'll just have to listen to your favourite music while playing. **GB**

FIRST DAY TARGET SCORE
10,000 points



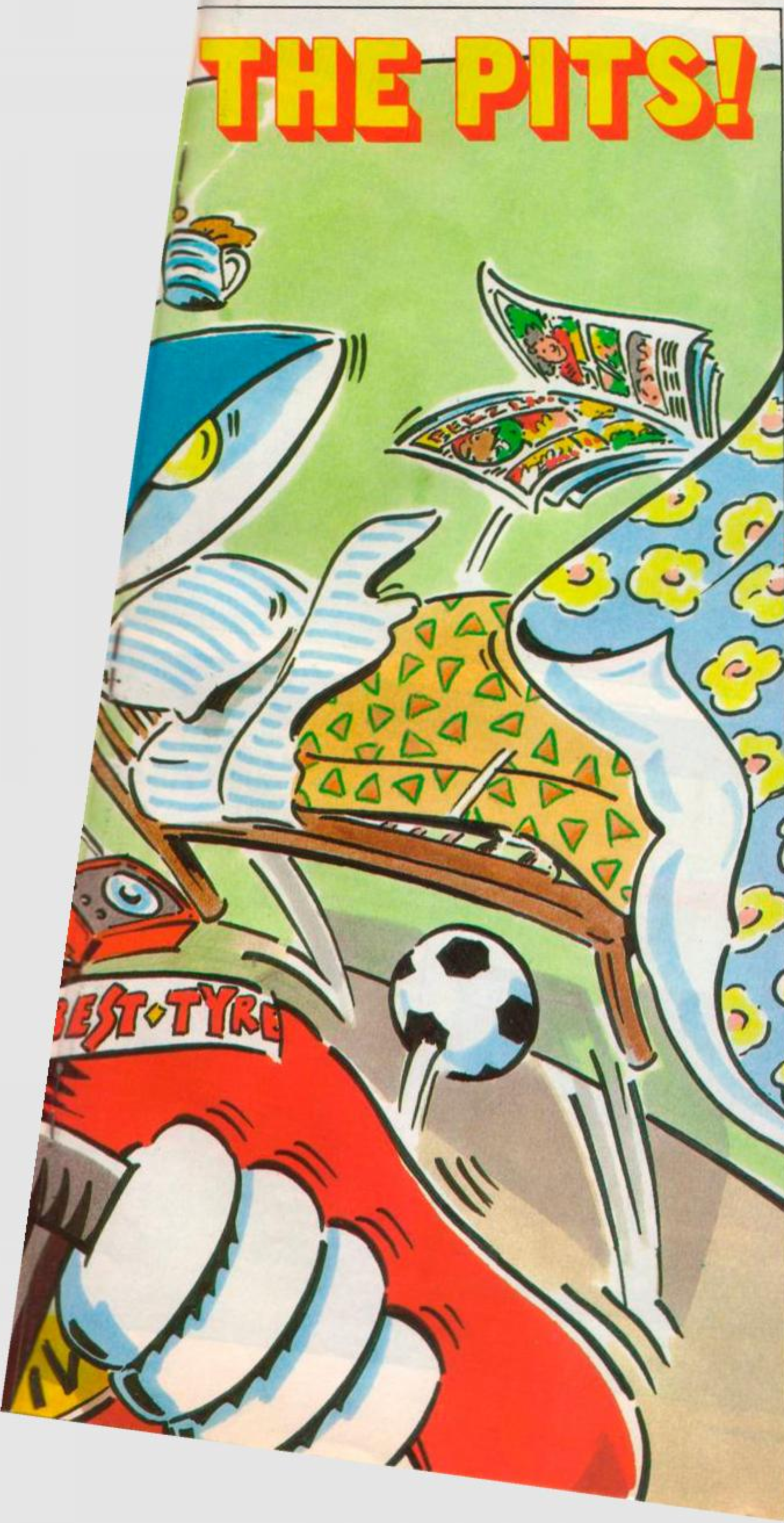


Practice course has targets, ramps, water and walls

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MISSION GENOCIDE

Firebird, £1.99 cass, joystick or keys



Aliens swoop into the attack

Battery releases shower of bullets

Flying over the smoothest of scrolling landscapes



Missiles revealed after shooting a silo

Silo on the ground to blow up

This game is brought to you by the programmer of Spindizzy, Paul Shirley. It's a departure for him to be producing a budget game, but it has all the hallmarks of a really good software author. This game has less thinking and more zapping than his previous efforts, the aim being to ZTB, Zap The Bad Stars.

The Bad Star empire has attacked your home planet of Crys-cit in an attempt to subjugate your race, the "genocide" of the title. Another attack is expected and which could occur at any time. The citizens of Crys-cit have decided to counter attack with a small strike force so that the Bad Star empire is crippled and unable to attack. You have been chosen to undertake this mission.

SECOND OPINION

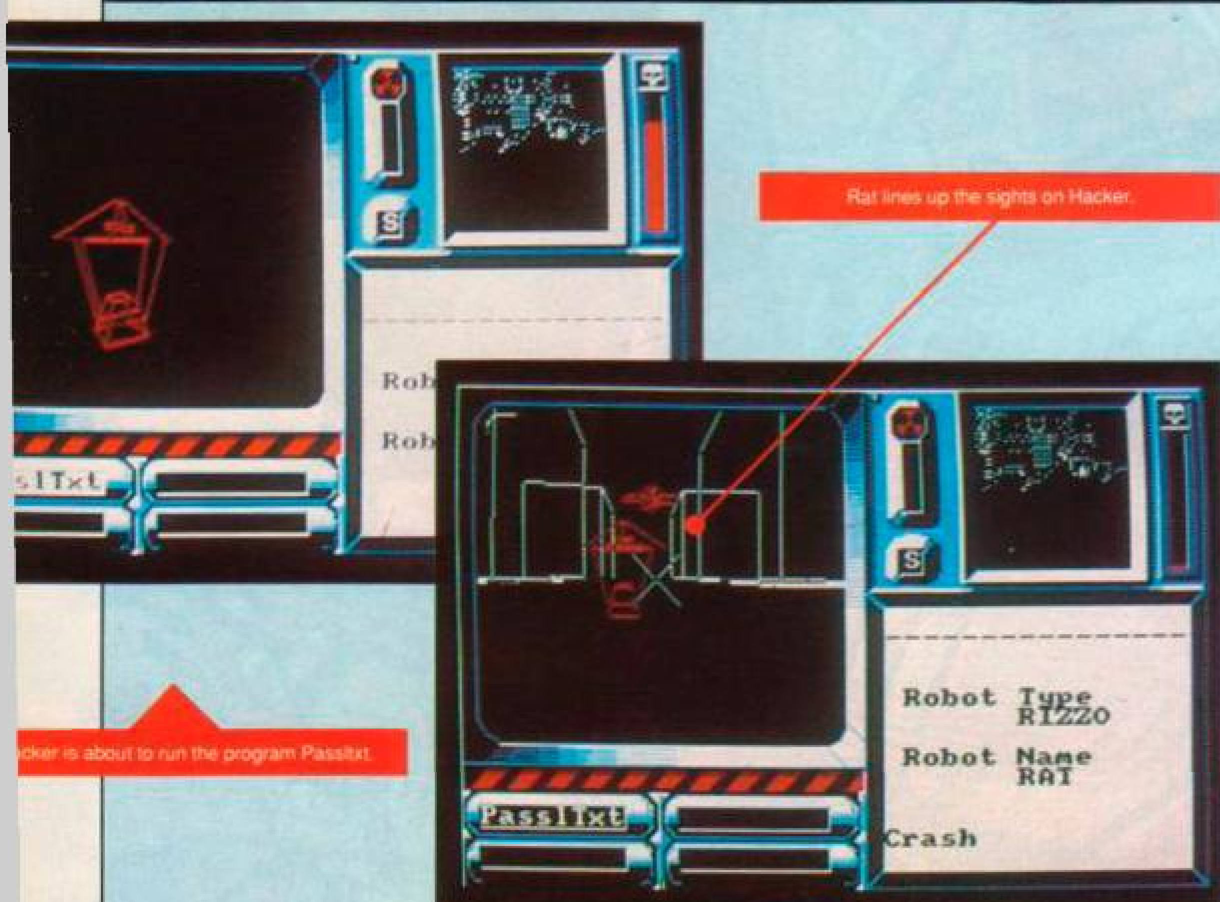
Paul Shirley has obviously cracked the problem of vertical scrolling on the Amstrad and Firebird will be rewarded by having an excellent selling game. It doesn't offer anything new to the shoot-em-up field but it's slickly produced and has plenty of long lasting enjoyment to offer. **BW**

GREEN SCREEN VIEW

Some levels are awkwardly coloured

CHOLO

Firebird, £14.95 cass, £19.95 disk, joystick or keys



Rat lines up the sights on Hacker.

...cker is about to run the program PassItxt.

A vector graphics masterpiece from the British Telecom software house, but will it be as big a success as *Elite*?. The instructions are comprehensive and include an attractive sci-fi story which explains the history behind the state of the planet Cholo. I won't spoil your enjoyment by describing it to you, suffice to say it adds atmosphere to the game. Let's jump in where the game itself starts.

The object of the game is to save the millions of people trapped in a high security bunker beneath the city. To do this you have to blow the top off the bunkers cap, which is not at all easy.

You start by controlling a robot called Rizzo. He's a RAT type robot with the ability to fire and paralyse other robots and to interface with robots and computers.

The screen shows the level of damage to your robot, a map, a message area, a view screen, a compass, the state of four program holding areas (explained later), and a radiation meter. Some robots have weapons and your screen will show a sight if the robot you're controlling has one.

The purpose of interfacing is to download programs from other robots and computers. For instance, there's a computer in the Central Computer Building which is always connected with a computer called Cyber 1. On this computer is the Password program. When run this shows all the twelve passwords known, which you can use when you interface with another robot.

To interface with a robot you first have to paralyse it by shooting it a few times. Shooting

 ZTB - Zonk That Barrett

The game is similar to Lightforce in that it's a downward vertically scrolling shoot-em-up, in which you fly over (and sometimes under) the landscape in your spaceship. Your ship can move up, down, left and right, but you'll spend most time at the base of the screen as the aliens come in from the top.

Your ship is armed with two basic types of weapons which are lasers and missiles. The lasers are used to shoot the aliens and the missiles to destroy ground based targets. Lasers are fired by holding the fire button down or auto fire can be selected by pressing space. This allows you to concentrate on firing your missiles at the ground targets.

On the surface of the planets are gun batteries which shoot out in several directions at a time. Later levels have batteries that fire homing missiles which are even tougher to dodge. The batteries can sometimes be destroyed by firing missiles at them, but many are invulnerable.

The surface of the planets are littered with silos. When a silo is hit by a missile it opens to reveal its contents. These can be a help or a hindrance and include: glue, black holes, missiles, lasers and shields. They're picked up by flying over them which isn't always easy with the attendant alien attackers. The Astro-Glue is needed to stick the weapons to your ship. The black holes however do the reverse and make the weapons fall off. The missiles and lasers increase your firepower and the shields stop you from being destroyed until they themselves are destroyed by a hit.

Every time you lose a life you are moved back a little towards the start of the level, so you must redo the area where you died. Fortunately you are not returned to the start of the level or it would be far too difficult. As it is it gives you the chance to immediately re-learn the area where you died.

There are twelve levels to battle through and they all have a title which is displayed at the beginning of the level. The third level is called Taking the Urineium and has graphic similarities to Uridium from Hewson (not available on Amstrad). Paul Shirley's humour is evident elsewhere as well, with levels like "Planet of Fruit" - zap the crops, and "I Don't Think They Like You". All twelve levels are different from each other with aliens of many varieties (or flavours). The aliens come in three basic formations, straight down the screen, zig-zagging and looping around. There are many small variations within that which make them tough to deal with, particularly when they're combined with ground batteries shooting at you.

The scrolling of the screen is the smoothest I've seen *(he's a poet and he knows it - ed)* and the scenery is detailed but lacking in colour. There's no animation or music, the sound is limited to explosions and firing effects.

At the price it is very good value although like most shoot-em-ups you may tire of it. As shoot-em-ups go it's one of the best and you won't go far wrong with this. **GB**

The Verdict

GRAPHICS 90%
- □ Superbly smooth vertical scrolling.
- □ Well designed variety of sprites.

SONICS 37%
- ■ Zaps and bangs and nowt else.

GRAB FACTOR 82%
- □ Lots of bad guys to blast at.
- ■ Similar to Lightforce and others.

STAYING POWER 77%
- □ Twelve increasingly difficult levels.
- ■ Gets repetitive.

AA RATING 80%
- □ Great shoot-em-up at budget price.

FIRST DAY TARGET SCORE
Complete three levels

The Verdict

GRAPHICS 67%
- □ Quickly drawn vector buildings and robots.
- ■ No hidden line removal.

SONICS 48%
- ■ No music, just effects.

GRAB FACTOR 82%
- □ Easy manoeuverability.
- □ Instructions include directions to Cyber 1.

STAYING POWER 85%
- □ Massive playing area.
- □ Difficult mission.

AA RATING 80%
- ■ Expensive on both cassette and disk.

it too much will render it useless and in some cases will blow it to pieces. Once it's paralysed you just bump into it to connect the interface. You're then asked to enter the password of this robot. You only have three goes but you can try interfacing repeatedly if you don't get it on the first three attempts. Once you have found the correct password you can now control that robot. Only one robot at a time can be under your control but you can switch between the ones you've interfaced with at will.

There is also a flying eye robot which you can interface with. Unfortunately it's in the air most of the time but sometimes it comes down to ground level. There are security guards running around the city and they're real tough guys which should only be messed with when your robot is fully operational. Also dotted around the planet surface are two types of transporter systems, land to land transporters and land to ship transporters.

The playing area is massive and the speed of drawing the vector displays is very fast. The main disappointment about the vector graphics aspect of the game is the fact that there is no hidden line removal, so that you see buildings which are really behind another building. This makes life very confusing at times.

The complexity of the game is relative to the amount you get into it, so there's no real trouble in starting off. I've never known a time yet when there hasn't been a robot ready for me to paralyse as soon as I get out of the Central Computer Building. This lets you get into the problems of finding the passwords straight away. How they have got so much data into a game which isn't 6128 only, baffles me. It's enough to make me drop my assembly language programming book due to "never gonna be able to do that anyway" thoughts filtering through the gentle waves of my brain.

The sound effects are nothing to write in about, but this does not detract much from the game. I suppose there was no space left for music, which is a shame. It might have made life a bit less boring while searching the city for other robots. A massive playing area, difficult task, easy and quick manoeuvring, make this game appealing to everybody. If you can afford the price, you may well be able to save the world. **CJB**

SECOND OPINION

Similar to Elite in some ways but this time there is more thought needed. Great fun going around interfacing with the other robots. Vector graphics are a little slow but this doesn't stop Cholo from being a great game. **GB**

GREEN SCREEN VIEW

Everything is clear in green.

FIRST DAY TARGET SCORE
Interface with Hacker.

ZTB - Zplat That Bob



INDOOR SPORTS

Advance, £9.95 cass, £14.95 disk, joystick or keys

A combination of four popular indoor sports all in the one package. They all use the same control keys but have different options available for each game. The four games load separately so the disk version will be appreciated by those who don't like waiting continuously for things to load.

The Verdict

GRAPHICS 70%
- ☐ Sensible use of colour.
- ☐ Good animation in all four games.

SONICS 36%
- ■ None of the four games posess good effects.

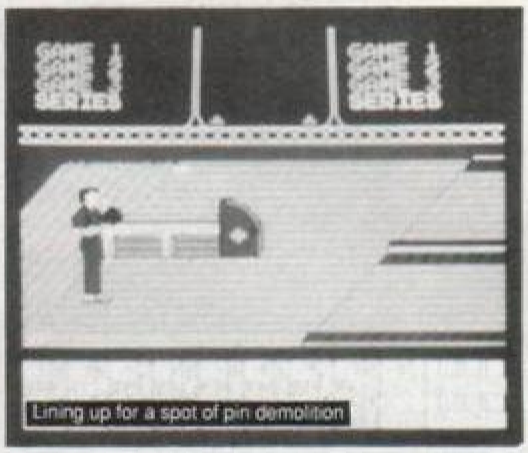
GRAB FACTOR 73%
- ☐ Four completely different games to play.
- ☐ Controls for most of the games are easy to use.

STAYING POWER 68%
- ☐ Different skill levels for each game.
- ☐ Play against the computer or a friend.

AA RATING 70%
- ■ Basically just four simple games.

Bowling is a simulation of ten-pin bowling. I found this game much better in all aspects than many of its kin sold separately. You play against the computer or an opponent of your choice - a mate. You control where you throw the ball from, and the line and curve which it takes. Fortunately the instructions don't go into any detail about the detailed rules of the game, just let the computer work out the spares, strikes and turkeys.

Ping pong is very much like the Konami version but with fewer nice touches. There is the option to have automatic bat control so that the computer moves your bat for you, leaving you to press fire when you want to play the shot. This does take some of the enjoyment away, but it makes it easier to get into - that's why it's optional!



Lining up for a spot of pin demolition

SECOND OPINION

If you look at the games individually they don't measure up to much but taken as a whole it's an enjoyable package. The disappointing part is the graphics which are mostly drab. The plentiful options mean you can toggle each sport to suit you. If you're look for something to spend rainy days with then you could do alot worse than this. **BW**

GREEN SCREEN VIEW

As ever drab graphics are okay in green.

Darts is quite a good version which has a few differences from the real thing. To add to the difficulty you have a variable time limit within which you have to throw all your arrows. You aim by moving the dart left and right for the horizontal, and by using a varying amount of strength for the vertical.

Air hockey is pretty tough, but thankfully fast. You can vary the speed so that you can get used to the game. All you control is your bat which you control vertically and horizontally to try to hit the puck.

All four games are well done, surprisingly short and therefore quick to loaded. Another good feature is that if the game you wish to play is the one that you have just played, the control program will not bother to load it again. Graphics are pretty good but there's nothing special about them. Use of colour is sensible, and the best sound is in the air hockey. Worth getting to my mind, I enjoyed playing all of the games. **CJB**

FIRST DAY TARGET SCORE

Beat computer at all four sports.

CHAMPIONSHIP BASKETBALL

Gamestar/Activision, £9.99 cass, £14.99 disk, joystick or keys

A basketball game has finally appeared on the Amstrad. This version is two-on-two where the second member of your team is computer controlled.

The game has a one or two player option. The two player gives you a human controlled and computer controlled player on each team.

SECOND OPINION

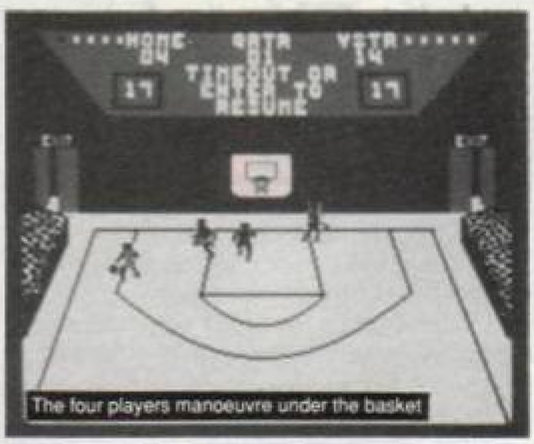
Definitely not a game that will get the adrenalin going. The action is too slow and the graphics too small and indistinct for you to get really involved in the game. It's possible to have quite an enjoyable tussle nonetheless; I just wish a bit more effort and polish had been put into this version. **BW**

GREEN SCREEN VIEW

No difficulties here.

The game is divided into four quarters each of which lasts for six minutes of real time. You are the home team in the one player game and while you are attacking you may instruct your team mate to use one of four different types of play. When you are defending you again have a choice of four plays to use.

There are basically three things you can do whilst you are in possession: dribbling, passing and shooting. Shooting is divided into a variety of shots which depend on your position on the court. You can also get your team mate to pass you the ball when he's in possession.



The four players manoeuvre under the basket

The screen is divided into the playing area and the scoreboard. When you are running to the opposite end of the pitch and choosing your play the scoreboard is replaced by the playcalling screen.

The sound is limited to simple spot effects and the ball bouncing. The graphics are fairly small and stick-like but the animation is alright. Both teams can be easily identified despite the poor use of colour, the human players can be identified by their different coloured shorts.



Harlem Pigs Trotters vs... The LA Pacemakers

The Verdict

GRAPHICS 47%
- ■ Not much colour to brighten things up.
- ■ Small players and basket.

SONICS 30%
- ■ Simple effects leave your ears empty.

GRAB FACTOR 61%
- ☐ Easy to play with pratice...
- ■ but a little difficult to get the hang of.

STAYING POWER 52%
- ☐ Computer opponent plays well.
- ■ Action is too slow to make it exciting.

AA RATING 57%
- ☐ If you're desperate for a basketball game it could be worse.

Sporting simulations have been popular recently and this is quite a good attempt at basketball. However that's only because it's the only one - much better than this could be achieved. **GB**

FIRST DAY TARGET SCORE

Beat the computer.



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RENEGADE

Imagine, £8.95 cass, £14.95 disk, joystick or keys

Imagine's latest arcade conversion has a similar plot to that of *Death Wish III*, in that you get to take on "the bad guys" in your own private war. This time you are heading for a meeting with your girlfriend, who lives in a rough part of town. You've got to fight your way through a variety of street gangs on your way using your martial arts skills.

SECOND OPINION

The graphics really are special on this one and there's some of the nicest animation I've seen. The gameplay is demanding but extremely satisfying when you succeed in beating a few heads in. The morality of the violence is for the individual to consider but personally I've never believed that games presented as fantasy have any effect on peoples behaviour. In these matters I usually find children demonstrate great maturity in knowing this is just a game and nothing else. **BW**

GREEN SCREEN VIEW

All levels are clearly playable.

The program is a multi-load game, the different backgrounds and gangs loading in four separate parts. As soon as a block of data has loaded the game starts immediately, so don't nip off for a cup of tea or you'll miss the start. A gang is made up of minions and a boss who have to be defeated within a time limit, otherwise you must start the level again.

The four gangs occupy the tube station, the pier, the back streets and the street which leads to your meeting place with your girlfriend. The tube station is filled with muggers, some of whom are armed with metal pipes. They crowd around you and try to beat you up. Every time you get hit you lose energy until it's all gone and you're left a bleeding corpse on the floor.

Control is a little tricky in that you need to use both hands. Movement around the screen is achieved with one hand and the combat with the other. The combat keys allow you to jump, attack right and attack left. Various moves are automatically selected by the attack keys, depending on your situation. You just have to attack left or right and decide whether to jump or not. The moves include a flying kick, backward kick, punch and a very tasteful knee in the groin. Most of these moves will stun an opponent but a flying kick or several hits will knock them down. Once they're on the floor you can leap on top of them and beat their head to a pulp - even more delightful than the knee.

On the first level you can also kick opponents off the tube platform for a quick kill. The

The Verdict

GRAPHICS 94%
- ☐ Great use of colour.
- ☐ The characters are superbly animated.

SONICS 85%
- ☐ Great tune plays throughout the action.

GRAB FACTOR 91%
- ☐ Excellent range of attacks and effects.
- ☐ Tremendous satisfaction from beating a boss.
- ■ Difficult to control since you need both hands.

STAYING POWER 89%
- ☐ The opponents are tough right from the start.
- ☐ Nice variety of opponents and behaviour.

AA RATING 90%
- ☐ Tremendous quality arcade conversion.

boss appears after you have killed enough of his minions and takes quite a few hits before he succumbs. A nice trick is to try to pin him to the floor or kick him off the platform, otherwise you may run into both time and energy shortages.

The pier is patrolled by a motorcycle gang and the stage is split into two parts. In the first part you have to flying kick bikers off their motorcycles as they race across the screen towards you. The second part is another group of bikers who attack you with chains, much as in the tube station. The boss again needs several hits and because of the two stages the time limit becomes even more testing.

The back streets are run by a gang of women whose boss is Big Bertha - she's built like Russian shot putter and is twice as strong. She has a wicked repertoire of attacks so watch out for her charging fore arm smash and close range headbutt. To kill Bertha you must first knock down her strength to zero and then flying kick her in the face when she comes running at you like an express train. Her accomplices are also nasty pieces of work attacking you with whips and knives.

The final stage involves fighting a gang who are armed with razors, one touch from which is enough to kill you. After the fight outside the building you go inside where the last boss is armed with a gun. He tries to shoot you as his razor armed minions slash at you. The game returns to the tube station after this level and the action gets more difficult.

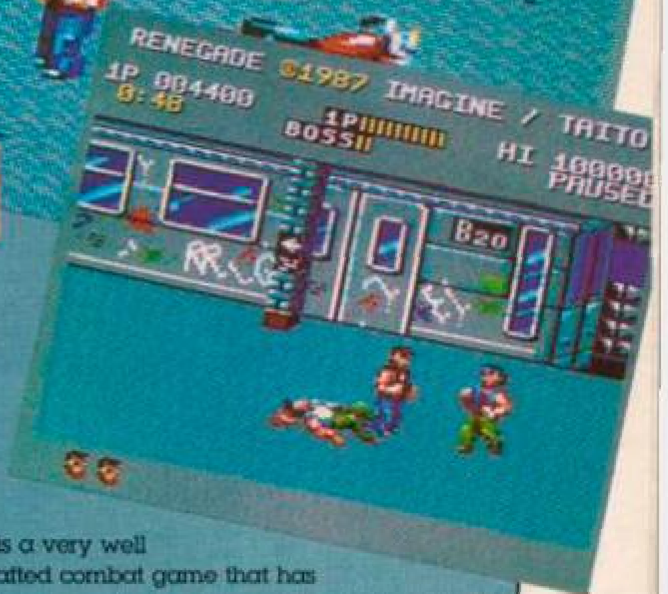
Throughout the game a tune plays which adds a bit of atmosphere to the action. The sound effects are limited to hits but this doesn't matter much because the tune plays constantly. The characters are large and well animated with an excellent variety of moves. There's superb use of colour and when anyone is killed blood oozes out of their heads as they lie on the floor.

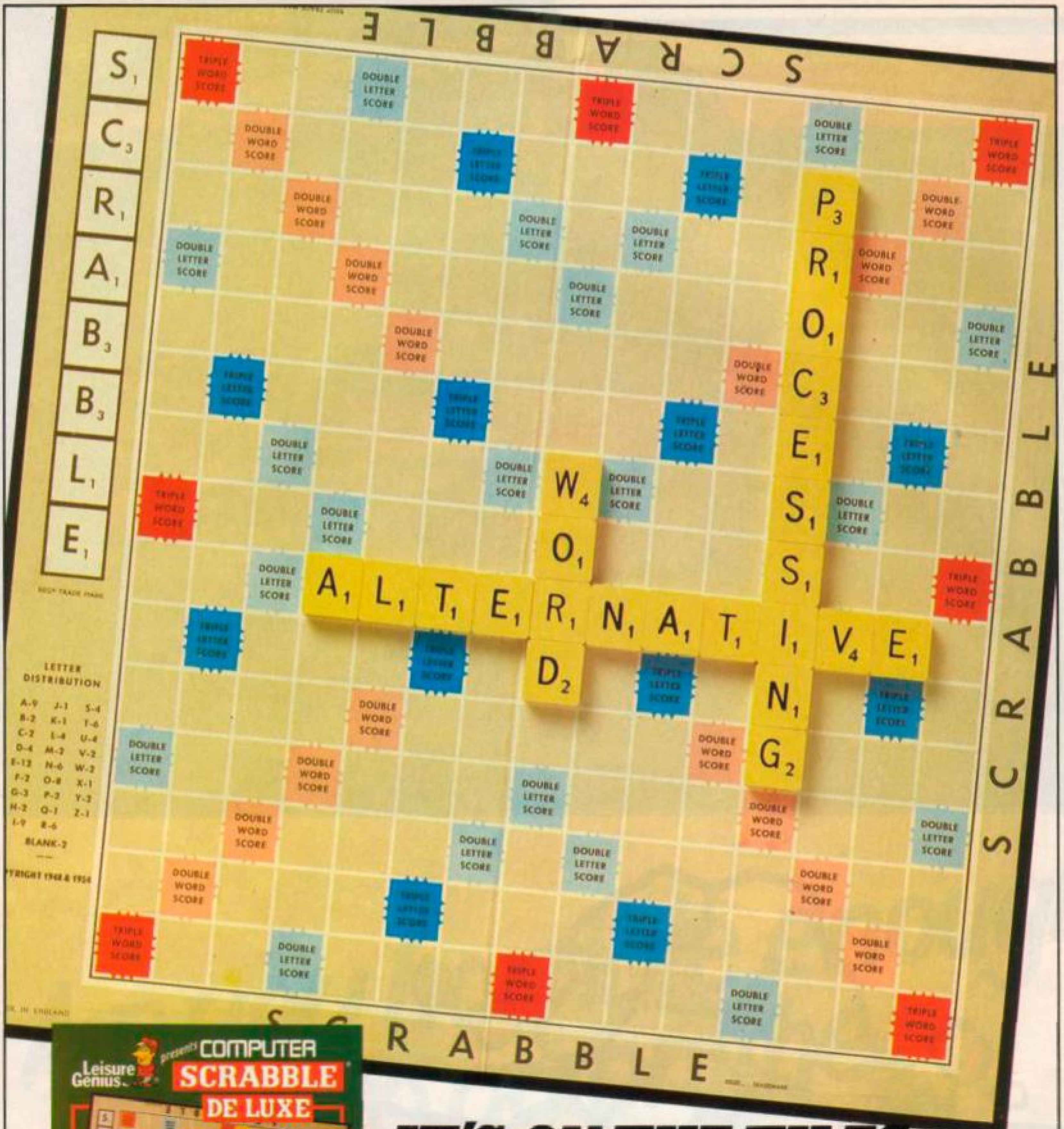
Some people are bound to find the game rather tasteless and morally dubious. However it is a very well crafted combat game that has lots of variety, great graphics and a terrific challenge. GB

FIRST DAY TARGET SCORE
Beat first boss



It's not Charles Bronson but the bad guys get just as good a beating







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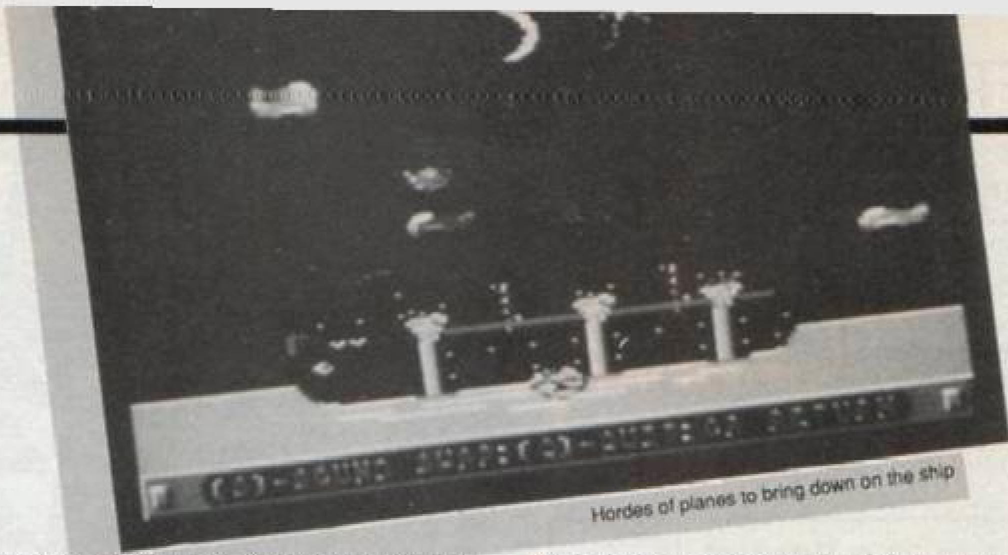
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Leisure Genius®

DR DESTRUCTO

Bulldog/Mastertronic, £1.99 cass, joystick or keys

From the software house that brought us *Feud* comes another budget game. This time it's an air combat game with an unusual two player option. It's reminiscent of some old dogfight games, but has some great graphics to bring it right up to date.



Hordes of planes to bring down on the ship

The Verdict

GRAPHICS 81%
- □ Delightfully colourful, cartoon graphics.
- ■ When planes overlap each other or the ship you get a graphic mess.

SONICS 58%
- ■ Only spot effects.

GRAB FACTOR 75%
- □ Early levels have lots of easy planes to blast.
- □ Pleasing variety of enemy craft.

STAYING POWER 67%
- □ Levels and time limit gets very tough.
- ■ Repetitiveness may cause loss of interest.

AA RATING 77%
- □ Great two player game.

Dr Destructo's Empire has to be destroyed before he can carry out his plan of world domination. You have seven days and nights, and seven lives, with which to complete your mission. There are 21 screens to get through and each screen is a ship or building viewed from the side. These have to be destroyed by shooting down enemy aircraft so that they crash into the target below. Each crash causes damage to the target and gradually a hole through to the sea is formed. Most of the targets need three holes in them before they sink but some need more.

SECOND OPINION

I loved this one immediately - it's bright and bold with super graphics and gameplay that gives you cramp in the hands. Unadulterated mayhem is great fun and when it's so well presented you just can't go wrong. You'll play this for hours on end and keep coming back to it. **BW**

GREEN SCREEN VIEW

Tricky to tell some planes apart

As time passes the screen background changes colour from daylight, through dusk and into night and back again in the morning. This is accompanied by the moon or sun travelling slowly across the sky.

The two player game has both players on screen at the same time flying around shooting the enemy aircraft. You are also both fighting for points since the player who scores the most points on any one screen gains an extra life.

The enemy aircraft come in a variety of forms which range from planes and helicopters to saucers and satellites. They each score different points and some are severe dangers to your aircraft. On the early levels they aren't dangerous but later on they kill on touch, mutate into other aircraft and even kill you while they are crashing.

The graphics are very colourful and have a chunky cartoon-like quality. Sound is simple and there are no musical tunes. The two player game makes it well worth the price. Whether you play with one or two you will always get an exhausted fire finger in what is eventually a taxing game. **GB**

FIRST DAY TARGET SCORE
Complete seven levels

GAME OVER

Imagine, £8.95 cass, £12.95, joystick or keys

Gremla is the woman on the cover of the game, who underwent a cover-up on the game's adverts. She's also a megalomaniac. Arkos, her faithful lieutenant, has stopped being faithful and decided to end her reign of greed and cruelty. You take the role of Arkos in his attempt to depose Gremla.

The game loads in two parts and represents two worlds. The first, the planet Hypsis, is 20 screens wide and is a series of flick screen rooms. The objective is to reach the last screen where you will be given a code number to allow you to play part two, the planet Sckunn.

SECOND OPINION

It's certainly a bit frustrating to begin with because you get wiped out very quickly - which seems to be a feature of Dinamic's games. Once you get into it it's most enjoyable - large sprites, plenty of action and even some platform jumping thrown in. **BW**

GREEN SCREEN VIEW

Everything is visible

Hypsis contains a variety of aliens with differing firepower. They fly on or appear out of the floor. These must be either shot or blown up with grenades. Particularly dangerous are stationary gun turrets which are very difficult to destroy. There are also some red and white barrels to be found. Shooting these three times reveals their contents including: grenades, force fields, hearts (for more energy), power up (for a more powerful weapon)and the more deadly mine which will kill you on contact.

The Verdict

GRAPHICS 89%
- □ Large colourful graphics.
- □ Good death routine.

SONICS 54%
- ■ Only a few zapping effects.

GRAB FACTOR 71%
- □ Lots to blast straight away.
- ■ Extremely annoying to have to go back to the start on first planet.

STAYING POWER 75%
- □ The second planet is more interesting.
- ■ Once you can get past level one it's not that tricky.

AA RATING 72%
- □ Again graphic excellence from Dinamic.
- ■ but the gameplay disappoints slightly.

The planet Sckunn contains two areas, the forest and the palace. The forest is occupied by kangaroo like creatures which drain your power when they hit you. The palace is occupied by other creatures and robots which all hamper your progress. Lying around the planet are "pow" icons which regenerate your power to the full. On both planets there are impressively large monsters that will really grab your attention when they appear.

The graphics are large and colourful and the animation is good. There are no tunes but the sound effects aren't bad. The most irritating thing about the first planet is that if you are killed, you have to go right back to the first screen. Very rewarding if you can persevere, but in the long run probably a bit limited. **GB**

FIRST DAY TARGET SCORE
Get off Hypsis

The big monster that appears on the planet Hypsis



ULTIMA RATIO

Firebird, £1.99 cass

Shoot-em-up where you have to clear ships of all objects including flying aliens and ground targets. Graphics are colourful and movement is fast. Good game for the price but it did not keep my interest for very long.

The Verdict

GRAPHICS 69%
- ☐ Different well-drawn characters.
- ☐ Many colours used.

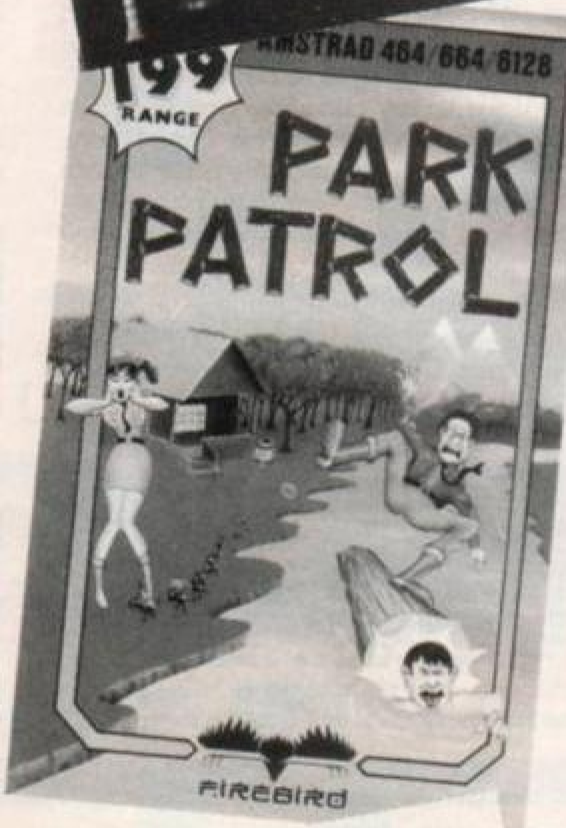
SONICS 51%
- ■ Nothing special.

GRAB FACTOR 71%
- ☐ Easy manoeuvrability.
- ☐ Lots of things to shoot.

STAYING POWER 64%
- ☐ Higher levels give more nasties.
- ■ No change in scenery.

AA RATING 67%
- ☐ Not a bad buy.





PARK PATROL

Firebird, £1.99 cass

You must travel around the park collecting rubbish, rescuing swimmers and keeping the wildlife under control. Five levels which can edited to make them harder or easier from within the program.

The Verdict

GRAPHICS 60%
- ☐ Well designed and animated characters.
- ■ Jerky scrolling.

SONICS 45%
- ■ Not much sound.

GRAB FACTOR 56%
- ☐ Easy to play, just trundle around picking up rubbish.
- ■ Tends to be repetitive.

STAYING POWER 50%
- ☐ Options for making it easier or harder to play.
- ■ Only five levels.

AA RATING 58%
- ■ May appeal to younger players.

BLACK MAGIC

US Gold, £9.95 cass, £14.95 disk

You move around a slow scrolling landscape trying to collect the six eyes of Anakar *(A sort of Treasure Hunt? - Ed)*. Littered about the landscape are chests, scrolls and the obligatory monsters to be defeated.

The Verdict

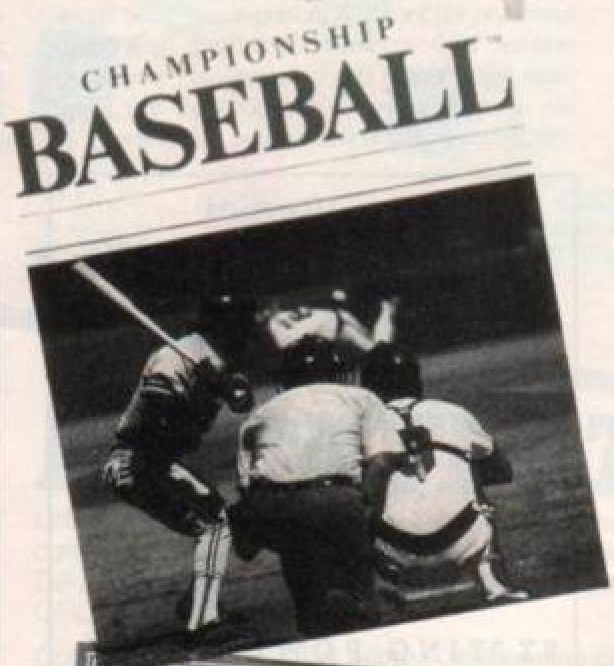
GRAPHICS 53%
- ☐ Colourful landscape.
- ■ Slow, jerky scrolling and small characters.

SONICS 44%
- ■ Just beeps and pings.

GRAB FACTOR 43%
- ☐ Four levels of wizardry to work your way through.
- ■ Boring just collecting things and killing monsters.

STAYING POWER 56%
- ☐ Gets more difficult as you collect the eyes...
- ■ but you may not be bothered to get that far.

AA RATING 47%
- ■ Too expensive for what it is.





BASEBALL

Gamestar/Activision, £9.99 cass, £14.99 disk

Baseball has reappeared on the Amstrad. Comparisons are bound to be made with Amsoft's *Hardball* and *Hardball* is the better game. Good pitching graphics, otherwise similar to previous games but with less options.

The Verdict

GRAPHICS 69%
- ☐ Large colourful graphics on pitching screen.
- ■ Matchstick men on the pitch.

SONICS 28%
- ■ The crowd cheers and ball hits the bat.

GRAB FACTOR 51%
- ☐ Simple to play when get used to it.
- ■ Confusing at first.

STAYING POWER 42%
- ■ Computer opponent is too easy to beat.
- ■ Gets tedious after a while.

AA RATING 47%
- ■ *Hardball* is better.





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RED L.E.D.



CHEAT MODE

Dick'n'Gary check out your tips, pokes and game-busting ploys. The best ones win an entire issue's *Raves* and the *Mastergame*. Send your latest gem to: Cheat Mode, *Amstrad Action*, 4 Queen Street, Bath BA1 1EJ

GAME OVER



Phil Howard wasn't content with poking one half of this Dinamic game, so this on gives infinite lives for both parts. Use Method 1 and remember you must choose, when prompted, which part of the game you are using the poke for.

If anyone was having too much trouble getting through to part 2 of the game then **J Redfield** of Mansfield has sent in the password it's **1Ø218**.

```
1 ' Game Over - tape
2 ' by Phil Howard
3 ' Amstrad Action Oct 87
10 DATA 21,F4,37,36,C3,23
20 DATA 36,16,23,36,BE,21
30 DATA 40,00,E5,21,00,B9
40 DATA E5,C3,C9,37,E5,21
50 DATA 6E,00,36,DC,23,36
60 DATA 15,23,36,89,E1,F1
70 DATA F3,C9,21,2E,B9,36
80 DATA ED,23,36,4B,23,36
90 DATA 02,21,2E,B9,11,2E
100 DATA 79,01,26,00,ED,B0
110 DATA 3E,79,32,47,79,32
120 DATA 4B,79,32,53,79,3E
130 DATA C9,32,54,79,CD,2E
140 DATA 79,DD,21,D9,BB,11
150 DATA 02,01,CD,67,BB,21
160 DATA 62,BE,22,C3,BC,C3
170 DATA 03,BC,3E,00,32,63
180 DATA 23,3E,C9,32,1F,23
190 DATA C3,94,8E
200 MEMORY &3000:Y=0
210 FOR X=&BE00 TO &BE6E
220 READ A$:A=VAL("&"+A$)
230 POKE X,A:Y=Y+A:NEXT
240 IF Y<>&2B0B THEN 330
250 INPUT "PART 1 OR 2 ";P
260 IF P=1 THEN 310
270 POKE &BE65,&78
280 POKE &BE66,&21
290 POKE &BE6A,&34
300 POKE &BE6B,&21
310 LOAD""
320 CALL &BE00
330 PRINT "DATA ERROR!"
```

POKE METHODS FOR TAPE

Here is how to input the majority of Cheat Mode tape pokes. The instructions for each poke tell you which of the two different methods to use. If you have a 664 or 6128, first type |tape.

METHOD 1

Rewind the game tape to the beginning. Now type in the poke listing. Then type RUN and press the Enter key. (Don't use the key marked CTRL or Control; that would stop the poke from working.) Press the Play key on the cassette deck, then any key on the main keyboard - spacebar will do nicely. The tape should now start to play through in the normal way.

METHOD 2

For this method you have to skip the first bit of the game program. To do that, start by rewinding the game tape to the beginning. Now type in the listing. Then type CAT and press Enter. Start the tape by pressing Play and then any key. Then watch the screen.

Soon you'll get the message Found *something* Block 1. It doesn't matter what the *something* actually is; this will vary from one game to another. If the Cheat Mode instructions just tell you to skip the first block, you should stop the tape here.

If the instructions tell you to skip several things, stop the tape when the Found message comes up for the last thing you're trying to skip.

Once you've stopped the tape, press Escape, type RUN and press Enter. Now press Play on the tapedeck and any key on the keyboard to start the tape running.

BALL CRAZY



Tony Watson of Oswestry has sent in this poke for the budget bouncing game from Mastertronic. It gives you infinite lives and is input using Method 1.

```
1 ' Ball Crazy - tape
2 ' by Tony Watson
3 ' Amstrad Action Oct 87
10 Load"!"
20 POKE &A064,&F0:POKE &A065,&9F
30 FOR n=&9ff0 TO &9ff7
40 READ a$:POKE n,VAL("&"+a$)
50 NEXT
60 DATA 3E,A7,32,6F,1C,C3,40,00
70 CALL &A000
```



RANA RAMA

Phil Howard's been busy again this month and his usual style of fair play has come up with a Method 1 poke that slows the rate of energy loss in *Ranarama*.



```
1 ' Ranarama - tape
2 ' by Phil Howard
3 ' Amstrad Action Oct 87
10 DATA 21,00,9a,e5,01,00
20 DATA 02,c5,3e,ee,ae,77
30 DATA 23,c1,0b,78,b1,20
40 DATA f4,21,37,9a,36,c3
50 DATA 23,36,28,23,36,be
60 DATA 21,1e,9a,e3,e9,50
70 DATA 2e,46,2e,48,21,8c
80 DATA 79,36,00,c3,b5,5a
90 memory &3000:y=0
100 FOR x=&BE00 TO &BE2F
110 READ a$:a=VAL("&"+a$)
120 POKE x,a:y=y+a:NEXT
130 IF y<>&1275 THEN 160
140 LOAD"rana":LOAD"!"
150 CALL &BE00
160 PRINT"Data error"
```

Also **Thomas Hall** of Yatton has sent in some tips for Hewsons froggy game.

1 The glyphs of power do not work on the generators.

2 Do not use a glyph of travel unless you have runes of a fairly high level.

3 Use the glyph of seeing to find hidden doors if you don't have the find spell.

4 Do not bother having a power spell higher than any of your other spells.

5 Try to clear each level before you leave it.

6 Always improve your defence spell before your attack spell.

7 Unseen is the best defence spell.

8 If you do not have many runes left do not get a new attack, defence or effect spell because you may not have enough runes for a new power spell.

9 Do not choose an attack, defence or effect spell of more than one level higher than your power spell.

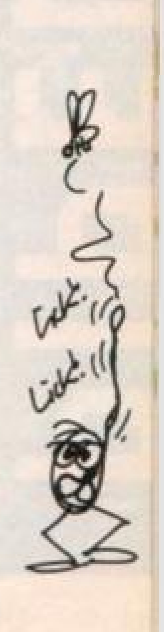
1Ø If you are running low on power then go to a glyph of sorcery and check your power spell is higher than mortal.

11 If your drain is anything but minimum then get a higher power spell.

12 Try to clear a room of monsters before you lock in ritual combat with a warlock.

13 During ritual combat always work from left to right.

14 If you have just won at ritual combat be careful not to leave the room or you will lose all the runes.



ZYNAPS



The final poke by **Declan Kennedy** gives you infinite lives and no loss of firepower when killed in Hewsons shoot-em-up *Zynaps*. This one is for the disk version and following it is a poke for the tape version.

```
1 ' Zynaps disk version
2 ' by Declan Kennedy
3 ' Amstrad Action Oct 87
1Ø LIN=1ØØ:ADDR=&BFØØ:MODE 1
2Ø FOR C=1 TO 7
3Ø TOTAL=Ø:FOR B=1 TO 2Ø
4Ø READ A$:A=VAL("&"+A$):POKE
   ADDR,A
5Ø
   TOTAL=TOTAL+A:ADDR=ADDR+1:NEXT
   :READ CHK$
6Ø IF TOTAL<>VAL("&"+CHK$) THEN
   PRINT "DATA ERROR IN
   LINES";LIN;"AND";LIN+1Ø:END
7Ø LIN=LIN+2Ø:NEXT
8Ø PRINT "PLACE ZYNAPS DISK IN
   DRIVE":PRINT "AND PRESS ANY
   KEY"
9Ø CALL &BB18:MODE Ø:CALL &BFØØ
1ØØ DATA
   AF,CD,ØE,BC,Ø1,ØØ,ØØ,CD,32,BC
   ,Ø1
11Ø DATA
   ØØ,ØØ,CD,38,BC,21,7F,BF,CD,Ø7
   FØ
12Ø DATA D4,BC,79,   22,7C,BF,
   32,7E, BF,21,ØØ
13Ø DATA ØF,11,ØØ,Ø8,ØE,24,C5,D5,
   E5,Ø7CF
14Ø DATA DF,7C,BF,21,7F,BF,CD,D4,
   BC,79,22
15Ø DATA 7C,BF,32,7E,BF,E1,11,ØØ,
   Ø2,ØAØF
16Ø DATA 19,D1,C1,ØC,79,FE,6C,28,
   21,FE,2D
17Ø DATA 28,1A,FE,36,28,16,FE,3F,
   28,Ø827
18Ø DATA 12,FE,48,28,ØE,FE,51,28,
   ØA,FE,5A
19Ø DATA 28,Ø6,FE,63,28,Ø2,18,C2,
   14,Ø7ØE
2ØØ DATA 18,FB,AF,32,18,57,32,19,
   57,32,1A
21Ø DATA 57,32,75,6Ø,32,76,6Ø,32,
   77,Ø66Ø
22Ø DATA 6Ø,C3,ØØ,9Ø,ØØ,ØØ,ØØ,84,
   ØØ,ØØ,ØØ
23Ø DATA ØØ,ØØ,ØØ,ØØ,ØØ,ØØ,ØØ,ØØ,
   ØØ,Ø237
```

Here's a tape poke by **Ian Murphy** of Accrington which gives you a choice of 255 lives, no sprites and rapid fire. It's a Method 2 poke.

```
1 ' Zynaps - tape
2 ' by Ian Murphy
3 ' Amstrad Action Oct 87
1Ø MEMORY &1FFF:MODE Ø
2Ø PRINT"LOADING : LOADER"
3Ø LOAD"!LOADER",&4ØØØ
4Ø MODE Ø:BORDER Ø
5Ø FOR i=Ø TO 15:READ a:INK
   i,a:NEXT
6Ø DATA Ø,26,13,16,15,6,3,24
7Ø DATA 12,9,18,19,2Ø,11,2,1
8Ø PRINT"LOADING : ZYNAPS"
9Ø POKE &414E,64:POKE &414F,Ø
1ØØ i=64
11Ø READ a$
12Ø IF a$="end" THEN 15Ø
13Ø POKE i,VAL("&"+a$):NEXT
14Ø i=i+1:GOTO 11Ø
15Ø CALL &4ØØØ
16Ø ' DELETE any data statements
    which you don't want to use
17Ø ' Remove sprites
18Ø DATA 3e,ØØ,32,3f,4a
19Ø DATA 32,44,4a,32,49,4a,32,4e,
    4a
2ØØ ' mulitple bullets on screen
21Ø DATA 3e,c9,32,39,61
22Ø ' 255 Lives
23Ø DATA 3e,ff,32,7e,5f
24Ø ' end data
25Ø DATA c3,Ø,9Ø
26Ø DATA end
```

AMAUROTE

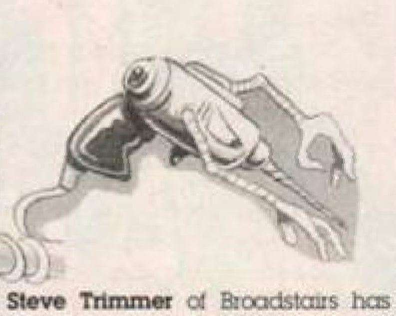
Phil Howard gets bored with doing infinite lives, so here's a Method 1 poke that gives you joystick control in the bug-busting budget game.

```
1 ' Amaurote - tape
2 ' by Phil Howard
3 ' Amstrad Action Oct 87
1Ø DATA 21,4Ø,ØØ,11,25,ØØ
2Ø DATA 3e,16,cd,a1.bc,21
3Ø DATA 14,be,22,59,ØØ,c3
4Ø DATA 4Ø,ØØ,21,d3,41,36
5Ø DATA c3,23,36,22,23,36
6Ø DATA be,c3,ØØ,4Ø,dd,21
7Ø DATA Øa,7f,11,Øc,ØØ,21
8Ø DATA 49,be,Ø6,Ø5,cd,3c
9Ø DATA be,dd,19,11,Ø9,ØØ
1ØØ DATA 23,1Ø,f5,c3,d4,26
11Ø DATA dd,36,ØØ.49,7e,dd
12Ø DATA 77,Ø1,dd,36,Ø2,ff
13Ø DATA c9,1Ø,Ø4,Ø2,Ø1,Ø8
14Ø y=Ø:MODE 1
15Ø FOR x=&BEØØ TO &BE4D
16Ø READ a$:a=VAL("&"+a$)
17Ø POKE x,a:y=y+a:NEXT
18Ø IF y<>&19Ø7 THEN 2ØØ
19Ø CALL &BEØØ
2ØØ PRINT"Data Error"
```

EXOLON

Justin Cole from Colchester has sent in a tip for the tape and disk versions of *Exolon*. Define the keys as Z.O.R.B.A. A short tune will play. Redefine the keys again to whatever you want and then start the game. You then have infinite lives. Simple huh?

PIPELINE



Steve Trimmer of Broadstairs has sent in this poke for *Super Pipeline 2* by Mastertronic. It's entered using Method 1 and when you lose a life you are automatically taken to the next pipe.

```
1 ' Super Pipeline 2 - tape
2 ' by Steve Trimmer
3 ' Amstrad Action Oct 87
1Ø MODE 1:OPENOUT"!dummy"
2Ø h=HIMEM:MEMORY &3FF
3Ø CLOSEOUT
4Ø LOAD"!P II"
5Ø POKE &6ØØ,&FF
6Ø FOR a=&BEØØ TO &BEØ4
7Ø READ a$:POKE a,VAL("&"+a$)
8Ø NEXT
9Ø CALL &4ØØ
1ØØ DATA a4,2Ø,
    53,4a,54
```

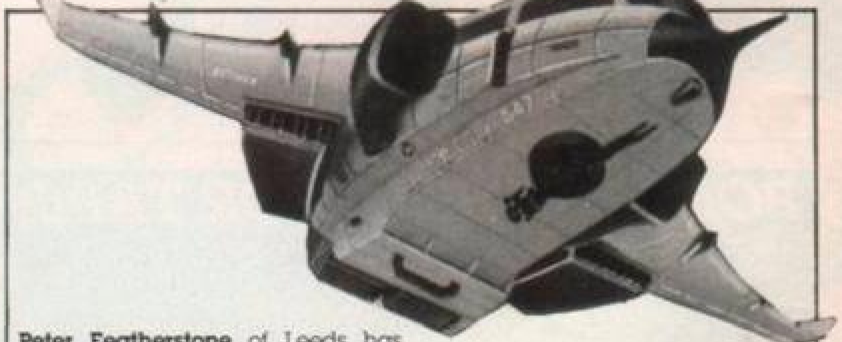


PROHIBITION

Peter Featherstone is as busy as ever and has sent in a poke for the tape version of *Prohibition*. It is entered using Method 1 and gives you infinite lives.

```
1 ' Prohibition - tape
2 ' by Peter Featherstone
3 ' Amstrad Action Oct 87
3Ø BORDER Ø:MODE Ø:INK Ø,3
4Ø INK 1,26:INK 2,13:INK 3,Ø
5Ø t=Ø
6Ø FOR f=&2ØØØ TO &2Ø5F
7Ø READ a$:a=VAL("&"+a$)
8Ø POKE f,a:t=t+a
9Ø NEXT f
1ØØ IF t<>8833 the PRINT "error"
    :END
11Ø CALL &2ØØØ
12Ø DATA 21,Øe,2Ø,11,64,ØØ,Ø1,5Ø
13Ø DATA ØØ,ed,bØ,c3,64,ØØ,f3,31
14Ø DATA ff,ff,21,ØØ,cØ,11,8Ø,3f
15Ø DATA af,cd,a1,bc,21,e6,ØØ,11
16Ø DATA ØØ,4Ø,af,cd,a1,bc,21,ØØ
17Ø DATA 4Ø,11,ØØ,4Ø,af,cd,a1,bc
18Ø DATA 21,ØØ,8Ø,11,ØØ,2Ø,af,cd
19Ø DATA a1,bc,af,32,69,Øb,21,18
2ØØ DATA Ø1,22,6a,Øb,21,ØØ,cØ,11
21Ø DATA ØØ,2Ø,af,cd,a1,bc,f3,21
22Ø DATA ØØ,cØ,11,ØØ,aØ,Ø1,ØØ,2Ø
23Ø DATA ed,bØ,c3,76,Ø2,ØØ,ØØ,ØØ
```

MISSION GENOCIDE



Peter Featherstone of Leeds has sent in a poke to give you infinite lives and to improve the built-in cheat mode on *Mission Genocide*. The cheat mode is activated by typing QED on the title screen, then pressing the keys 1 to 9 gives you levels 1 to 9. To selct levels 1Ø to 12 use : . ; and Ø respectively. Use Method 1 to input the poke.

```
1 ' Mission Genocide - tape
2 ' by Peter Featherstone
3 ' Amstrad Action Oct 87
3Ø BORDER Ø:MODE Ø
4Ø FOR f=Ø TO 15
5Ø READ a$
6Ø POKE f,VAL("&"+A$)
7Ø NEXT
8Ø CALL &BE8Ø
9Ø DATA 1a,ØØ,Ø6,Ø2,1a,18,14,ØØ
1ØØ DATA Ød,Ø9,Øf,1Ø,12,ØØ,Øe,Ø3
11Ø DATA f3,21,ØØ,ØØ,11,ØØ,be,Ø1
12Ø DATA 4Ø,ØØ,ed,bØ,31,3f,bf,21
13Ø DATA b5,be,e5,3e,Ø6,21,4Ø,bf
14Ø DATA 11,ØØ,ØØ,cd,a1,bc,21,c7
15Ø DATA aØ,36,ØØ,21,e5,97,36,Øc
16Ø DATA 21,e2,97,36,ØØ,21,ØØ,be
17Ø DATA 11,ØØ,ØØ,Ø1,4Ø,ØØ,ed,bØ
18Ø DATA c3,38,86,ØØ,ØØ,ØØ,ØØ,ØØ
```

There have been lots of tips sent in for *Stormbringer*. These have been combined into a playing guide, brought to you by **Kojo Ellimah** of London, **Stephen Stokes** of Aylesbury, **Gavin Manning** of London, **John Lumbus** of London and **Gavin Smith** of Macclesfield.

1 When you are carrying the chicken it lays eggs.
2 When you are carrying an egg command Robin to help and he will give you the newspaper.
3 Read the newspaper to tell you which disguise to wear. Wear the right disguise and carry the newspaper. This will allow you entry into the castle where you will find the teleport pad and teleport key.
4 Standing on a plant and casting the pass plant spell can get you the elf-horn.
5 If you teleport whilst carrying the teleport key and teleport pad then you will end up in Limbo.
6 The shield is in Limbo and so are the jumping boots.
7 The shield stops the axes draining your energy.
8 You need the boots to reach the upper levels of castle Storm.
9 When you are in the upper part of the castle walk left until you reach the giant statue. Walk under the arrow and drop the advert. Jump on top of the advert and you can pick up the silver arrow.
10 To kill Bearwoolf. Summon Robin by blowing the Elf-Horn, give him the silver arrow and a golden egg. Command him to help and he will shoot Bearwoolf.
11 Go to the Entwood and take the brass ankh from Barker. This makes your energy go up to 6Ø% when it reaches zero.
12 Aramis Le Peux has the wand of command.
13 The magic missile is in Bearwoolf's hoard.
14 You can get both the arrow and the magic missile by standing on top of the advert while you are underneath the appropriate object.
15 To open the security door you must pull the three levers which aren't main levers.
16 Ask Rachel for help in the castle. She will tell you the password number to activate the teleport machine in the teleport room. Convert the number into binary and pull the appropriate main levers. eg supposing the number was 1Ø: in binary this is 11ØØ1Ø1 so set levers 7,6,3 and 1.
17 To pass the conveyor belt in the main lever level, throw the teleport pad at Reggie the rat, and teleport.
18 The magic missile induces sleep in everybody it hits.
19 The elf horn summons people.
20 The chicken lays golden, silver and copper eggs.
21 The magic talisman restores magic levels quickly.
22 To travel to somebody you require the magic missile and crystal ball.
23 Off-white knight must be asleep before you can merge with him.
24 Be careful with the dynamite and boomerang.
25 You must carry the glow shield into main lever 2. Wearing it won't help you. Once in there, drop it on the floor.
26 You score 1% for every room you enter. Bearwoolf's caves are all counted as one room.
27 Aramis Le Peux will read the list of clues. Give him the list of clues and command him to help.
28 The feather can be used to make people happy by tickling them.
29 Do not touch or command Bearwoolf because he will kill you.

Match Point

R Pratt of Ramsgate has some tips that will slow down the devastating speed of the Psion game. Hold down the keys ZXC and , and as soon as the ball is served the match will take place in slow motion. This makes it possible to beat the computer. Also if you wave the racquet around while your opponent is trying to serve it may put him off.



Short Circuit

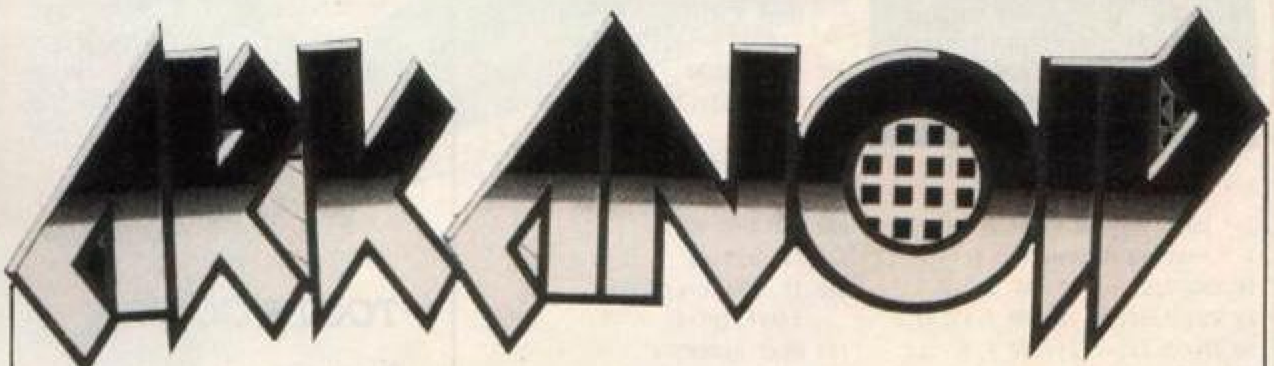
If you're having trouble with the first part of the Ocean game then **Wayne Dobson** of Kendal has some tips for you.

1 Keyring opens all filing cabinets.
2 Bunch of keys opens all locked doors.
3 Password + passcard + security notes: knocks out all security alarms.
4 Once security alarms are off, passcard allows access through security doors.
5 Jump needed to get past robot. Now you can get laser board.
6 Password + fire-alarm manual + security notes: knocks out sprinklers.
7 Leave objects which aren't needed in place of those that are.
8 Don't switch alarm system until 17.51.

ASPHALT

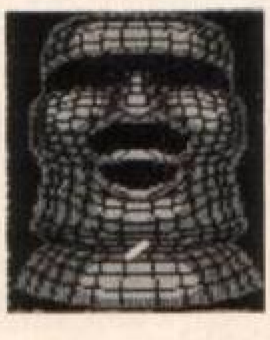
Declan Kennedy from Armagh has sent in three pokes this month. This one is for the disk version of *Asphalt*, it gives you infinite lives, bullets flamethrowers and mines.

```
1 ' Asphalt - disk
2 ' by Declan Kennedy
3 ' Amstrad Action Oct 87
1Ø MODE 1:tot=Ø:FOR x=&BFØØ TO
   &BF35
2Ø READ a$:a=VAL("&"+a$)
3Ø POKE x,a:tot=tot+a:NEXT
4Ø IF tot<>5735 THEN PRINT
   CHR$(7);"OOOPS! YOU BETTER
   CHECK THE DATA":PRINT:END
5Ø PRINT "PLACE ASPHALT DISK IN
   DRIVE":PRINT "AND PRESS ANY
   KEY"
6Ø CALL &BB18:MODE Ø:CALL &BFØØ
1ØØ DATA 11,4Ø,ØØ,21,FF,BØ,ØE,Ø7,
    CD,CE
11Ø DATA BC,Ø6,Ø7,21,2f,BF,11,4Ø,
    ØØ,CD
12Ø DATA 77,BC,21,4Ø,ØØ,CD,83,BC,
    CD,7A
13Ø DATA BC,AF,32,C9,77,32,C7,7C,
    32,F8
14Ø DATA 7C,32,13,7D,C3,DØ,5F,41,
    53,5Ø
15Ø DATA 48,41,4C,54
```



This poke from **Richard Hodges** of Barnet gives you infinite lives for player one in the tape version of *Arkanoid*. Use method 1.

```
1 ' Arkanoid - tape
2 ' Richard Hodges
3 ' Amstrad Action Oct 87
1Ø DATA dd,21,ØØ,bf,11,4f,ØØ,cd
2Ø DATA 4e,bc,3e,d8,32,4d,bf,3e
3Ø DATA 87,32,4e,bf,c3,ØØ,bf,ØØ
4Ø DATA 3e,ØØ,32,f3,Ø2,c3,e5,45
5Ø DATA 21,4Ø,2Ø,11,4Ø,ØØ,Ø1,19
6Ø DATA Ø2,ed,bØ,21,4Ø,ØØ,e5,21
7Ø DATA ØØ,bb,e5,21,19,Ø2,e5,21
8Ø DATA 1f,b1,e5,21,bb,Ø2,e5,f1
9Ø DATA 21,e5,b7,11,d4,b7,f3,c9
1ØØ ' This is the 6128 version
11Ø ' For 464 change
12Ø ' 8Ø, 9Ø and 18Ø to read
13Ø ' 8Ø DATA Ø7,b8,e5,21,bb,Ø2,
    e5,f1
14Ø ' 9Ø DATA 21,ea,b1,11,d9,b1,
    f3,c9
15Ø ' 18Ø IF s<>7519 THEN GOTO
    24Ø
16Ø FOR a=&87CØ TO &88Ø7
17Ø READ a$:POKE a,VAL("&"+a$)
18Ø s=s+VAL("&"+a$):NEXT
19Ø IF s<>7538 THEN GOTO 24Ø
2ØØ MEMORY &2ØØØ
21Ø LOAD"":CALL &3A6A
22Ø LOAD"!",&2Ø4Ø:POKE &2Ø4B,&7C
23Ø CALL &87EØ
24Ø PRINT"data error"
```





IN
THE LIVING DAYLIGHTS

Neil Hackney of Macclesfield has sent in some tips for ØØ7's latest adventure, but he hasn't cracked levels 7 and 8 yet.

Level 1 - Gibraltar
On this level forget about the SAS, just run to the end and change your gun to Walther PPK. Now shoot the man who appears when the screen won't scroll any further.Your score will increase by 5Ø, at which point you should run off the right hand side of the screen.

Level 2 - Music Conservatory
Simple this one, again forget about the men who pop up and shoot at you, just keep running, jumping and rolling to the end of the level.
Weapon - night vision glasses

Level 3 - The Pipeline
Just run. Jump the pipes on the floor. To get past the high pipes, roll just as the line of pipe is about to touch his head. Forget about the falling pipes as they usually miss you anyway.
Weapon - Hard hat



Level 4 - The Mansion House
Forget the helicopter and the men who shoot at you. Just shoot at the first milkman (by selecting and using the bazooka you need only shoot the milkman once), and then run on the next milkman. As soon as a milkman appears at the edge of the screen shoot him. When all three milkmen have been shot run to the end of the level.
Weapon - Bazooka

Level 5 - The Fairground
Quickly get the weapon you selected and get the target about half way along the screen and at Bond's head height. Shoot the balloons as they come onto the target, then shoot the man. An alternative way of doing this level is, if your energy is quite high, shoot the man with the Walther PPK straight away and run through all the balloons to the edge of the screen.
Weapon - Crossbow

Level 6 - Tangiers
No sweat. Shoot the men who throw the long grenades at you and jump the gaps. Forget about the men who shoot at you.
Weapon - Dart Gun

DESTRUCTO

Here's a Method 2 poke from **L Townsend** of Accrington which gives you 1ØØ lives each and extra time for the Mastertronic dogfighting game. He's also sent a tip for *Galletron*. On the options screen press Control and C to get infinite lives. Control and A returns the game back to normal.

```
1 ' Dr Destructo - tape
2 ' by L Townsend
3 ' Amstrad Action Oct 87
1Ø ENV 1,15,-1,12:ENV 2,3,Ø,7
2Ø ENV 3,12,-1,24:ENV 4,13,-1,2
3Ø ENV 5,12,-1,24:ENV 6,7,-2,1
4Ø ENV 7,15,1,1,15,-1,51
5Ø ENV 15,12,-1,1Ø:ENT 1,6,4Ø,1
6Ø ENT -2,5,2Ø,1,5,-21,1
7Ø ENT -3,2,13,1,2,-12,2
8Ø ENT -4,2,6,1,2,-6,2,2,-5,1,
   2,4,2
9Ø ENT 5,12,3Ø,2:ENT -6,3,25,1,
   3,-25,3
1ØØ ENT -7,3,24,1,3,-25,3
11Ø ENT -8,3,25,3,3,-24,3
12Ø ENT -9,2,8,1,2,-7,2,1,14,2,
   1,-14,3
13Ø ENT -1Ø,3,12,2,3,-12,3
14Ø ENT 11,225,1,4
15Ø ENT 13,1ØØ,-2,2,8,25,1
16Ø ENT -14,5,3,2,6,-3,2
17Ø ENT 15,1ØØ,14,2
18Ø ENT -13,1ØØ,-2,2,8,25,1
19Ø ENT -14,5,3,2,6,-3,2
2ØØ ENT 15,1ØØ,14,2
21Ø FOR n=Ø TO 15:INK n,Ø:NEXT:
   BORDER Ø
22Ø INK 1,2
23Ø DATA Ø,13,26,6,15,24,19,18,9
   ,11,2
24Ø DATA 1,3,23,4,Ø
25Ø MODE Ø:MEMORY 1ØØØØ:LOAD"!",
   11ØØØ
26Ø CALL 11ØØØ
27Ø DIM i(15),c(15):FOR n=Ø TO
   15
28Ø READ c(n):NEXT
29Ø FOR a=Ø TO 26
3ØØ FOR n=Ø TO 15
31Ø INK n,i(n)
32Ø IF i(n)<c(n) THEN
   i(n)=i(n)+1
33Ø NEXT n:NEXT a
34Ø CALL 11ØØ2
35Ø FOR n=2 TO 15:INK n,Ø:NEXT:
   MODE Ø
36Ø LOCATE 6,24:PRINT"Please
   Wait"
37Ø CALL 11ØØ4
38Ø FOR n=Ø TO 15:READ a:INK
   n,a:NEXT n
39Ø DATA Ø,26,22,14,11,2Ø,3,15,2
   4,9,12
4ØØ DATA 13,6,1,Ø,1Ø
41Ø POKE &4D8C,1ØØ:' player 1
   1ØØ lives
42Ø POKE &354F,1ØØ:' player 2
   1ØØ lives
43Ø POKE &4DAØ,&F:' extra time
44Ø POKE &4D91,&5:' sky colour
45Ø POKE &4D96,&5:' sky colour
46Ø CALL 13362
```

'THING' BOUNCES BACK

The second poke by **Declan Kennedy** is for the disk version of *Thing Bounces Back* and gives you infinite oil.

```
1 ' Thing Bounces Back - Disk
2 ' by Declan Kennedy
3 ' Amstrad Action Oct 87
1Ø MODE 1:TOTAL=Ø
2Ø FOR x=&4Ø TO &6A
3Ø READ A$:A=VAL("&"+A$)
4Ø POKE X,A:TOTAL=TOTAL+A
5Ø NEXT
6Ø IF TOTAL<>2799 THEN PRINT
   CHR$(7);"DATA ERROR, BETTER
   CHECK IT":END
7Ø PRINT "PLACE THING DISK IN
   DRIVE":PRINT "AND PRESS ANY
   KEY":CALL &BB18
8Ø CALL &4Ø
9Ø DATA 21,69,ØØ,CD,D4,BC,79,22
1ØØ DATA 8Ø,ØØ,32,82,ØØ,21,ØØ,Ø1
11Ø DATA 11,ØØ,ØØ,ØE,41,DF,8Ø,ØØ
12Ø DATA 21,61,ØØ,22,Ø5,Ø1,C3,ØØ
13Ø DATA Ø1,3E,ØØ,32,19,92,C3,ØØ
14Ø DATA 88,84,ØØ
```



This poke for *Into the Eagles Nest* disk version was sent in by **Julian Page** of Shrewsbury and gives you infinite stamina, ammo and keys.



```
1Ø ' Into the Eagles Nest - disk
2Ø ' by Julian Page
3Ø ' Amstrad Action Oct 87
4Ø FOR x=&BFØØ TO &BF4Ø
5Ø READ z$
6Ø z=VAL("&"+z$)
7Ø POKE x,z
8Ø NEXT x
9Ø CALL &BFØØ
1ØØ DATA 21,4Ø,bf,cd,d4,bc,79,22
11Ø DATA 41,bf,32,43,bf,21,ØØ,Ø1
12Ø DATA 1e,ØØ,16,ØØ,Øe,41,df,41
13Ø DATA bf,21,22,bf,22,a4,Ø1,c3
14Ø DATA ØØ,Ø1,3e,c3,32,d4,a8,21
15Ø DATA 3Ø,bf,22,d5,a8,c3,ØØ,aØ
16Ø DATA 21,ØØ,ØØ,22,fØ,25,af,32
17Ø DATA 9Ø,Øa,32,a2,19,c3,ØØ,Ø1
18Ø DATA 84
```

TOOT'S CORNER

The gremlins got at us again last month, but we've now improved our checking procedure so that less mistakes should occur. Last month's cock-ups were as follows:

In the *Thing Bounces Back* poke a line was missed out of the listing. Add in this:

```
55 POKE f,VAL("&"+a$)
```

The *Speed King* listing had an error in line 9Ø, which should have read:

```
9Ø PRINT"(Y/N)?";: a$="": WHILE
   a$<>"y" a$<>"n": a$=LOWER$
   (INKEY$): WEND: PRINT a$:
   RETURN
```

CHOLO

Ian Culpin of Canterbury has sent in the passwords to access some of the robots in Firebird's expensive vector grahic game, *Cholo*.

Leadie: Mclean
Hacker: Plugin
Rats: Rebels
Plane: Flyboy
Flying Eye: Brazil
Koke: Lorean

BALL BREAKER

G Barnes of Manchester has sent a poke for CRL's 3D breakout clone. It gives you infinite everything and is entered using Method 1.

```
1 ' Ball Breaker - tape
2 ' by G Barnes
3 ' Amstrad Action Oct 87
1Ø MODE 1
2Ø MEMORY 29999
3Ø LOAD"a"
4Ø tot=Ø
5Ø FOR n=&BEØØ TO &BE18
6Ø READ a$:a=VAL("&"+a$)
7Ø POKE n,a:tot=tot+a
8Ø NEXT n
9Ø IF tot<>2493 THEN PRINT"Data
   Error":END
1ØØ CALL &BEØØ
11Ø DATA 21,Ø9,be,22,c6,75,c3,3Ø
12Ø DATA 75,97,6f,65,32,bd,1e,22
13Ø DATA d6,28,22,e1,28,c3,4Ø,ØØ
14Ø DATA 4a
```

WINNERS

This month's winner of the *Mastergame* and all the *Raves* is **Declan Kennedy** for three excellent disk pokes. The five runners-up, who will be receiving a *Rave* or the *Mastergame* are: **Phil Howard** for three more cracking pokes, **Peter Featherstone** for his two pokes, **Neil Hackney** for *Living Daylights* tips, **Thomas Hall** for *Ranarama* tips, and **L Townsend** for his *Dr Destructo* poke.

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TYPE-INS

Program made plain

Discover a program's secrets: how it works, improvements that can be made and techniques worth remembering. This month we look at a derivation on the Trivial Pursuit theme...

TRIVIA QUIZ

Adrian Bassett of Strawberry Avenue in Sheffield has written a program that will get your brain ticking. It is similar to Trivial Pursuit, Give Us a Break and other general-knowledge games. Adrian's Trivia Quiz comes with only 10 questions - the idea is that you supply the questions and answers.

Up to five can play Trivia Quiz. Enter players' names and wait for the questions to appear. You are given several seconds to view a question, after which four possible answers will appear, each one numbered. The player whose turn it is must select one of the answers by pressing the corresponding number key.

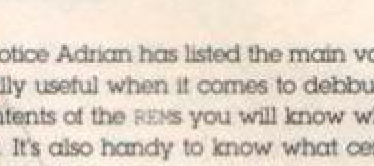
As there are only 10 questions it is left to you to fill the program with further questions. Trivia Quiz can handle 1,000 questions (and 4,000 answers) - enough for you? Once you've inserted extra questions try the game out on your family and friends.

The more the merrier

```
1 ' Trivia quiz
2 ' by Adrian Bassett
3 ' Amstrad Action    October 87
100 ' ** MAIN VARIABLES USED **
110 ' NA$(1 to 5) player's name
120 ' PLA Number of players
130 ' QUE$(Number of questions in DATA -- upto 1000)
140 ' CHI(Number of choices per question -- usually 4)
150 ' ANS(Number of correct choice)
160 :
170 ' ** INSTRUCTIONS **
180 ' One to five players may play
190 ' Each will be asked for name
200 ' Each will be told when it is his or her turn
210 ' Each player should press a key between 1 and 4 to
215 ' choose the correct answer
220 ' After all the questions have been asked the players
225 ' will be told their scores and the winner
230 ' Up to 1,000 questions may be stored
240 ' The last line must read 'DATA *****'
250 ' Questions can be tagged at bottom of the listing
260 ' No other alterations need be made when adding questions
270 ' All these REMs can be left out
280 :
```

Notice Adrian has listed the main variables in REM statements. This is especially useful when it comes to debbuging a program. By peeering at the contents of the REMs you will know which variables must be watched closely. It's also handy to know what certain variables do (and contain) as you alter them during run time.

You will also see that the instructions are placed in the REMs. Of course you don't need to type in all those REM statements, but do bear in mind that in a couple of years when you load this program you probably won't remember a thing about it.



All systems go

You should be familiar with the opening lines of Trivia: they are made up of numerous GOSUB commands. The REMs imediately following the GOSUBs instruct you on what each subroutine does. This is useful as you can keep track of the program and is helpful when debugging.

```
290 GOSUB 650: ' ** INITIALISE **
300 GOSUB 820: ' ** ASK HOW MANY PLAYERS **
310 GOSUB 900: ' ** ASK FOR PLAYER'S NAME **
320 GOSUB 570: ' ** NUMBER OF QUESTIONS TO BE ASKED **
330 :
340 GOSUB 1000: ' ** MAIN LOOP **
350 IF noq>1 THEN 340
360 :
```

The variable in line 350 holds the number of questions that are to be asked. If this reaches one, you exit the loop and the player with most correct answers is anounced (or if you chose single-player, your score is displayed).

```
370 ' ** PRINT WINNER **
380 :
390 CLS: GOSUB 750: LOCATE 1,8: PEN 13
395 PRINT"    NAME    SCORE"
400 FOR n=1 TO pls: LOCATE 3,10+n: PEN 9: PRINT na$(n);
410 PEN 3: LOCATE 12,10+n: PRINT"  ";SCO(n): NEXT n
420 win=0: FOR n=1 TO pls
430 IF SCORE(n)>SCORE(1) AND SCORE(n)>1 THEN win=n
440 IF SCORE(n)>SCORE(2) AND SCORE(n)<>2 THEN win=n
450 IF SCORE(n)>SCORE(3) AND SCORE(n)<>3 THEN win=n
460 IF SCORE(n)>SCORE(4) AND SCORE(n)<>4 THEN win=n
470 IF SCORE(n)>SCORE(5) AND SCORE(n)<>5 THEN win=n
480 NEXT n
490 IF win>0 THEN LOCATE 5,20: PEN 13: PRINT na$(win);
    " WINS!!": GOSUB 1310
500 PEN 3: LOCATE 1,22: PRINT  " PRESS  P  TO PLAY  "
510 LOCATE 1,23: PRINT "  PRESS  E  TO END  "
520 k$="": K$=INKEY$: IF k$="E" OR k$="e" THEN END
530 IF k$="P" OR k$="p" THEN RUN ELSE GOTO 520
540 :
```

When several people play the computer must keep tabs on everyone's score and, at the end of the game, decide upon the winner. Lines 420 to 490 are responsible for this.

Once the game has finished you will be asked if you wish to play another game. Lines 520 and 530 wait for a keypress: P to play again or E to end. Adrian uses INKEY$ in a long-winded manner. Line 520 starts k$="": k$ = INKEY$. A much neater way of doing this is k$ = UPPER$(INKEY$). The UPPER$ converts all keypresses to uppercase which means it is unnecessary to check for lowercase characters. Lines 520 and 530 could be re-written 520 k$ = UPPER$(INKEY$): IF k$="E" THEN END and 530 IF k$="P" THEN RUN ELSE 520.

Questions, questions

```
550 ' ** NUMBER OF QUESTIONS TO BE ASKED **
560 :
570 CLS: GOSUB 750: LOCATE 1,10: PAPER 0: PEN 9
575 PRINT"     ENTER NO OF    QUESTIONS TO ANSWER"
580 LOCATE 7,13: PEN 13: PRINT"1 TO";co
```

```
590 LOCATE 9,15: INPUT "",noq$
600 noq=VAL(noq$): IF noq>co THEN 590
610 noq=noq+1: RETURN
620 :
```

This part of the program lets you choose the number of questions per game. Your input is placed into noq$ (line 590). Line 600 then proceeds to convert the string data into numeric data. Note that the expression a = val(a$) throws up an error message if a$ contains any non-numeric characters.

```
630 ' ** INITIALISE **
640 :
650 FOR c=0 TO 15: INK c,c: NEXT c
660 MODE 0: PAPER 0: BORDER 0: CLS
670 spa$=SPACE$(20): sp1$=SPACE$(18)
680 DIM que$(1000),cho$(1000,4),ans(1000): co=0
690 READ que$(CO): IF que$(co)="*****" THEN RETURN
700 FOR n=1 TO 4: READ CHO$(co,n): NEXT n
710 READ ans(co): co=co+1: GOTO 690
720 :
```

Trivia Quiz starts its life at line 630. Colours are assigned and memory is reserved for question data.

You may not have come across the function SPACE$. It is used to create a string of spaces of a given length. For example, line 670 reads spa$ = SPACE$(20). This defines spa$ as 20 character-spaces. If you wished to give a string other character values you could use STRING$ like this: a$ = STRING$(20,"%"), which would define a$ to be 20 percent (%) symbols.

```
730 ' ** PRINT TITLE **
740 :
750 LOCATE 1,1: PAPER 13: PRINT spa$;spa$;spa$;spa$;spa$
760 LOCATE 2,2: PAPER 1: PEN 15: PRINT sp1$: LOCATE 2,3
770 PRINT"  TRIVIA  QUIZ  ";: LOCATE 2,4: PRINT sp1$
780 PAPER 0: RETURN
790 :
```

You can see spa$ being used in line 750. Its function is to clear five lines of text starting at the top of the screen.

Name and number

The number of players is selected from this subroutine. Adrian has done away with several if-then statements by making clever use of INKEY$. Line 850 tests for a keypress between one and five. If it detects one, line 860 changes k$ from a string to numeric data. The command ASC returns the Ascii value of a character. So ASC ("A") results in 65. Variable pls will hold a number between 1 and 5: the Ascii code for "1" is 49 - notice also that 48 is subtracted from the Ascii value returned.

```
800 ' ** ASK FOR NUMBER OF PLAYERS **
810 :
820 CLS: GOSUB 750: LOCATE 1,10: PAPER 0: PEN 9
825 PRINT"ENTER NO OF PLAYERS "
830 LOCATE 7,12: PEN 13: PRINT"1 TO 5"
840 k$=INKEY$: IF k$="" THEN 840
850 IF k$<"1" OR k$>"5" THEN 840
860 pls=ASC(k$)-48: RETURN
870 :
880 ' ** ASK FOR PLAYERS' NAMES **
890 :
900 CLS: GOSUB 750: FOR pla=1 TO pls
910 LOCATE 1,10: PAPER 0: PEN 9
915 PRINT"PLAYER ";pla;" ENTER NAME"
920 LOCATE 1,12: PEN 3: PRINT"  MAX 8 CHARACTERS  "
930 LOCATE 6,15: PEN 12: PRINT"........"
935 LOCATE 6,15: INPUT"",na$(pla)
940 IF LEN(na$(pla))>8 THEN LOCATE 6,15:
    PRINT "........": GOTO 930
950 IF LEN(na$(pla))<1 THEN 930
960 na$(pla)=UPPER$(na$(pla)): LOCATE 6,15
965 PRINT"........": NEXT pla: RETURN
970 :
```

Array elements

All the question data is read into an array making it easy for the program to pick a question at random. Line 1020 is responsible for choosing a question. The variable q holds a random number between 1 and the total number of questions, the corresponding element from the string array is then printed.

```
980 ' ** MAIN LOOP **
990 :
1000 pl=1: noq=noq-1
1010 pla=pl: tim=361
1020 RANDOMIZE TIME: q=INT(RND(1)*co):PAPER 0:CLS:GOSUB 750
1030 le=10-LEN(na$(pla))/2: LOCATE 7,7: PEN 13
1040 PRINT"SCORE";sco(pla):LOCATE LE,9:PEN 3:PRINT na$(pla)
1050 LOCATE 1,11: PEN 9: PRINT que$(q);"?"
1060 LOCATE 9,19: PEN 13: PRINT"TIME": c=0: GOSUB 1430: c=1
1070 :
1080 FOR ch=1 TO 4
1090 le=10-LEN(cho$(q,ch))+16/2: LOCATE 2,13+ch: PEN 3
1100 PRINT ch;:LOCATE le,13+ch: PEN 15:PRINT cho$(q,ch);"?"
1110 NEXT ch
1120 :
1130 k$="": k$=INKEY$
1140 tim=tim-1: GOSUB 1430: IF tim<1 THEN sco(pla)=sco(pla)
    -1: pl=pl+1: IF pl>pls THEN RETURN ELSE GOTO 1010
1150 IF k$="" THEN GOTO 1130
1160 :
1170 k=ASC(k$)-48: IF k<1 OR k>4 THEN 1130
1180 IF k=ans(q) THEN sco(pla)=sco(pla)+1: GOSUB 1310:GOSUB
    1270: pl=pl+1: IF pl>pls THEN RETURN ELSE GOTO 1010
1190 sco(pla)=sco(pla)-1: GOSUB 1370: GOSUB 1230: pl=pl+1:
    IF pl>pls THEN RETURN ELSE GOTO 1010
1200 :
```

If you answer a question correctly, you'll be shuttled off to line 1250. Incorrect and it's off to 1210. These lines simply print a message, pause for a few seconds and return you to the main loop for further grilling.

```
1210 ' ** PRINT WRONG **
1220 :
1230 PEN 15: LOCATE 1,13: PRINT "       WRONG": FOR dl=1 TO
    2000: NEXT dl: RETURN
1240 :
1250 ' ** PRINT CORRECT **
1260 :
1270 PEN 15:LOCATE 1,13: PRINT "      CORRECT": FOR dl=1 TO
    2000: NEXT dl: RETURN
1280 :
```

A correct answers brings a jolly tune to your ears. But get it wrong and you hear a sad song.

```
1290 ' ** HAPPY TUNE **
1300 :
1310 SOUND 1,90: SOUND 1,85: SOUND 1,75: SOUND 1,70
1320 SOUND 1,60: SOUND 1,90: SOUND 1,85: SOUND 1,75
1330 SOUND 1,70: SOUND 1,60: RETURN
1340 :
1350 ' ** SAD TUNE **
1360 :
1370 SOUND 1,150: SOUND 1,160: SOUND 1,170: SOUND 1,180
1380 SOUND 1,150: SOUND 1,160: SOUND 1,170: SOUND 1,180
1390 RETURN
1400 :
```

After a question has appeared on screen a timer starts counting down. You have roughly 10 seconds to think about the question before four possible answers pop up. Again the timer is displayed, but this time you must choose one of the answers before the timer runs out - otherwise it's marked as incorrect.

```
1410 ' ** DRAW AND UNDRAW TIME CIRCLE **
1420 :
1430 IF c=1 THEN 1490
```

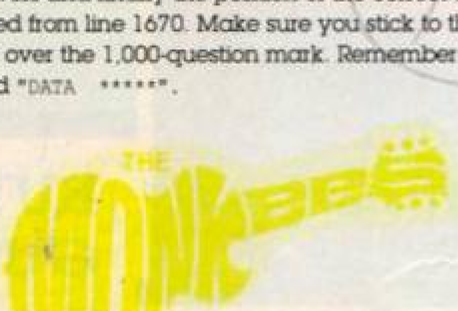
```
1440 DEG: FOR cir=0 TO 360: MOVE 320,40
1450 IF cir>100 THEN GRAPHICS PEN 9 ELSE GRAPHICS PEN 6
1460 DRAW 320+45*COS(cir),40+45*SIN(cir)
1470 NEXT cir: RETURN
1480 :
1490 DEG: MOVE 320,40: GRAPHICS PEN 1:DRAW 320+45*COS(tim),
     40+45*SIN(tim)
1500 IF tim<100 THEN SOUND 1,90: FOR dl=1 TO 20: NEXT dl:
     SOUND 1,0
1510 FOR dl=1 TO 20: NEXT dl: RETURN
1520 :
```

The command `GRAPHICS PEN` does not exist in 464 Basic - only on the 664 and 6128 machines. If you own a 464, remove line 1450 and delete `GRAPHICS PEN 1` from line 1490. This won't affect the program much, just cause the timer to appear in only one colour.

Adding questions

```
1530 ' ** QUESTION DATA **
1540 :
1550 ' DATA question,ch1,ch2,ch3,ch4, No of correct ch
1560 :
1570 DATA WHERE IS MACHUPICHU,INDIA,PERU,TAIWAN,JAPAN,2
1580 DATA WHAT RACE IS SPOCK    IN STAR TREK,MARTIAN,
     VULCAN,ROMULAN,KLINGON,2
1590 DATA WHAT IS THE CURRENCY     IN JAPAN,PUNTS,FRANCS,
     PESATAS,YEN,4
1600 DATA WHICH PART DOES ALAN ALDA PLAY IN MASH,BURNS,
     PEARCE,KLINGER,O'RILEY,2
1610 DATA "   WHAT IS A YUCCA",DOG,FISH,ROCK,PLANT,4
1620 DATA HOW MANY POUNDS ARE   THERE IN A KILO,1 POUND,
     2.2 POUNDS,3 POUNDS,1.5 POUNDS,2
1630 DATA "      WHO SANG       'I'M A BELIEVER'",THE
     MONKEES,THE BEATLES,THE WHO,THE MOVE,1
1640 DATA WHO SANG 'DON'T GIVEUP ON US BABY',DAVID BOWIE,
     DAVID SOUL,DAVY JONES,TOM JONES,2
1650 DATA WHO SANG THE ALBUM   'RAISING HELL',GENESIS,BON
     JOVI,JIMMY HENDRIX,RUN DMC,4
1660 DATA WHAT IS A RED GIANT,A STAR,A MOON,A ROCKET,A
     COMET,1
1670 DATA *****
```

The questions are held in the data statements starting from line 1570. The first item in a data line is the question. This is followed by the four possible answers and finally the position of the correct answer. More data can be added from line 1670. Make sure you stick to the correct format and don't go over the 1,000-question mark. Remember also that the last line must read `"DATA *****"`.



BarLogo

If you've played with DR Logo (found on one side of your CPM system disk), you'll have no trouble getting to grips with this program from **Derek Johnston** of Belfast. It's a cutdown version of Logo. It works from the Amstrad's native operating system and according to Derek is anything up to 20 times faster.

BarLogo gives you five new commands from Basic:

- |FD, x is equivalent to DR Logo's FD command. The variable x is the distance you wish to move the graphics cursor or turtle forward. For example |FD, 40 moves the turtle by 40 pixels.
- |BK, x moves the turtle in the opposite direction to which it is facing: |BK, 32 will move the turtle back 32 pixels.
- |RT, x will move the turtle to the right by x pixels.
- |LT, x moves the turtle left.
- |SH, x turns the turtle through x degrees. For example, |SH, 90 moves it by 90 degrees.

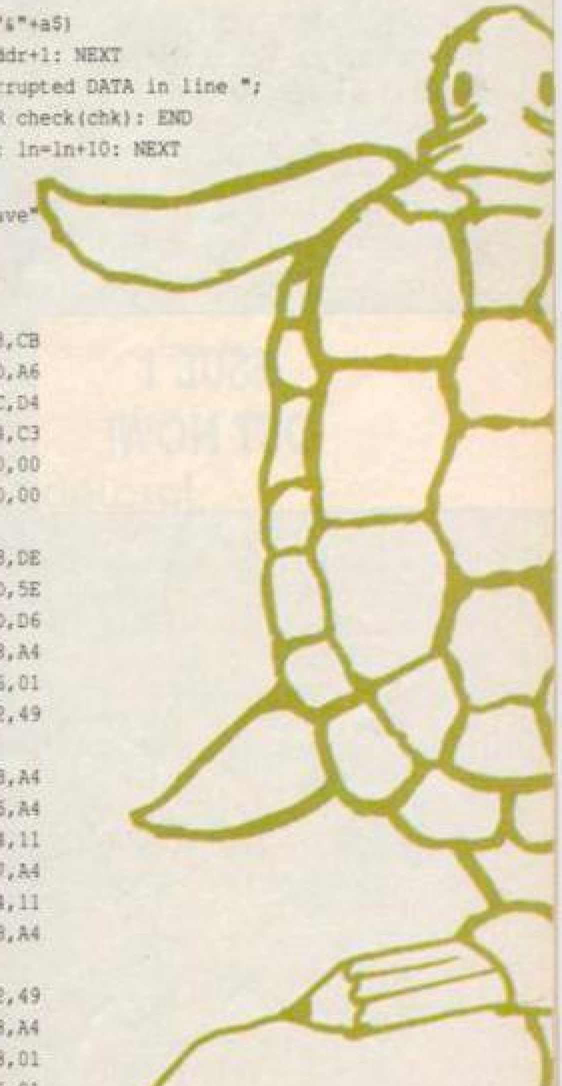
By mixing BarLogo and Basic, complex designs can be produced. In fact, anything that can be done from DR Logo can be done equally well (but faster) using BarLogo and Basic. The first listing pokes machine-code into memory and then saves a binary file to cassette or disk. To use BarLogo in your own programs, you must incorporate the following line in your listing:

```
10 MEMORY &A411: LOAD"barlogo.bin",&A412: CALL &A432
```

This loads BarLogo into memory and lets you make use of its commands.

If you're stuck for ideas try running Derek's demo program. It's impressive.

```
1 ' BarLogo
2 ' by Derek Johnston
3 ' Amstrad Action    October 87
10 DATA 41,DB,82,52,82,05,79,4B,5E,7C,68,8C,38,3B,88
20 DATA FF,51,F8,0D,3E,85,41,D3,6C,E4,A1,87,2D,7C,6D
30 DATA 3A,B5,6D,FB,08,D4,3E,16,CA,06,EC,73,BC,9A,C4
40 DATA DD,F1,8C,B1,CB,DC,89,33,15,3D,13,A8,4A,EB,2C
70 :
80 REM Double-check this DATA
90 :
100 MEMORY 42000: DIM check(60)
110 FOR n=1 TO 60: READ a$: aq=VAL("&"+a$): CHECK(n)=aq
120 ar=ar+aq: NEXT
130 IF ar<>7530 THEN PRINT"Error in DATA. Check lines
    10 to 40": END
140 chk=1: ln=300: addr=42001
150 FOR n=1 TO 10: FOR j=1 TO 6
160 FOR k=1 TO 10: READ a$: x=VAL("&"+a$)
170 POKE addr,x: t=t XOR x: addr=addr+1: NEXT
180 IF t<>check(chk) THEN PRINT"Corrupted DATA in line ";
    ln: PRINT" Displacement ";t XOR check(chk): END
190 t=0: chk=chk+1: ln=ln+10: NEXT: ln=ln+10: NEXT
200 :
210 MODE 2: PRINT"Press Space to save"
220 WHILE INKEY$<>" ": WEND
230 SAVE "BARLOGO.BIN",B,42001,600
290 :
300 DATA 25,A4,C3,4D,A4,C3,85,A4,C3,CB
310 DATA A4,C3,6D,A4,C3,5A,A4,C3,2D,A6
320 DATA 47,D0,46,C4,42,CB,52,D4,4C,D4
330 DATA 53,C8,00,01,11,A4,21,3B,A4,C3
340 DATA D1,BC,FC,A6,11,A4,00,00,00,00
350 DATA 9C,FF,64,00,00,00,02,00,00,00
360 :
370 DATA FE,01,C2,5C,A6,DD,7E,00,C3,DE
380 DATA BB,B4,00,FE,01,C2,5C,A6,DD,5E
390 DATA 00,DD,56,01,2A,58,A4,19,CD,D6
400 DATA A4,C9,FE,01,C2,5C,A6,2A,58,A4
410 DATA 11,68,01,19,DD,5E,00,DD,56,01
420 DATA ED,52,CD,D6,A4,C9,3E,00,32,49
430 :
440 DATA A4,32,41,A4,CD,E7,A4,22,43,A4
450 DATA 2A,58,A4,11,5A,00,19,CD,D6,A4
460 DATA CD,E7,A4,22,47,A4,2A,58,A4,11
470 DATA 5A,00,CD,36,A6,38,09,2A,47,A4
480 DATA CD,3C,A6,22,47,A4,2A,58,A4,11
490 DATA 0E,01,19,CD,D6,A4,ED,5B,43,A4
500 :
510 DATA 2A,47,A4,C3,F9,BB,3E,00,32,49
520 DATA A4,3C,32,41,A4,18,B7,22,58,A4
530 DATA 11,68,01,CD,36,A6,D8,11,68,01
540 DATA ED,52,18,EF,DD,6E,00,DD,66,01
550 DATA 22,45,A4,CD,05,A5,CD,2F,A5,3A
560 DATA 49,A4,B7,C4,3C,A6,3A,41,A4,B7
570 :
580 DATA C4,3C,A6,C9,2A,58,A4,11,B4,00
590 DATA CD,36,A6,38,0D,21,49,A4,CB,CE
```

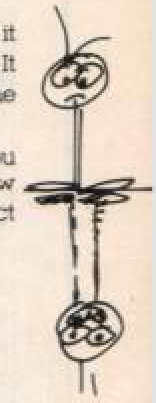




```
600 DATA 2A,58,A4,11,B4,00,ED,52,11,5A
610 DATA 00,CD,36,A6,38,06,11,B4,00,EB
620 DATA ED,52,22,4B,A4,C9,21,79,A5,3A
630 DATA 4B,A4,FE,5A,20,04,2A,45,A4,C9
640 :
650 DATA B7,28,05,23,23,3D,18,F8,5E,23
660 DATA 56,EB,ED,4B,45,A4,C3,50,A5,79
670 DATA B0,20,04,21,00,00,C9,11,00,00
680 DATA ED,53,3F,A4,E5,D1,0B,78,B1,28
690 DATA 0F,ED,5A,30,F7,E5,2A,3F,A4,23
700 DATA 22,3F,A4,E1,18,EC,2A,3F,A4,C9
710 :
720 DATA 00.00.7B.04.EF.08.64.0D.DE.11
730 DATA 53,16,C1,1A,35,1F,A3,23,0A,28
740 DATA 71,2C,D8,30,39,35,9A,39,ED,3D
750 DATA 41,42,8E,46,DB,4A,1B,4F,5B,53
760 DATA 80,57,C0,5B,E6,5F,05,64,1D,68
770 DATA 30,6C,3B,70,39,74,31,78,1C,7C
780 :
790 DATA 00,80,D7,83,A8,87,6B,8B,28,8F
800 DATA D7,92,7A,96,10,9A,9F,9D,1A,A1
810 DATA 8F,A4,F6,A7,4A,AB,98,AE,D8,B1
820 DATA 05,B5,24,B8,3D,BB,3C,BE,34,C1
830 DATA 19,C4,F0,C6,BA,C9,71,CC,1B,CF
840 DATA B7,D1,39,D4,B5,D6,17,D9,71,DB
850 :
860 DATA B2,DD,E6,DF,06,E2,19,E4,18,E6
870 DATA 03,E8,DB,E9,A6,EB,5D,ED,00,EF
880 DATA 90,F0,0C,F2,7B,F3,D0,F4,18,F6
890 DATA 45,F7,66,F8,72,F9,65,FA,4A,FB
900 DATA 1C,FC,DA,FC,84,FD,14,FE,98,FE
910 DATA 07,FF,63,FF,A4,FF,D9,FF,F3,FF
920 :
930 DATA 21,B4,00,22,58,A4,C3,6D,A4,7C
940 DATA 92,C0,7D,93,C9,7C,2F,67,7D,2F
950 DATA 6F,23,C9,57,72,6F,6E,67,20,4E
960 DATA 6F,2E,20,6F,66,20,70,61,72,61
970 DATA 6D,65,74,65,72,73,00,11,44,A6
980 DATA CD,00,B9,CD,36,CB,C3,60,CB,00
990 :
```

```
1 ' BarLogo graphic demo
2 ' by Derek Johnston
3 ' Amstrad Action    October 87
10 MEMORY &A411: LOAD"BARLOGO.BIN",&A412: CALL &A432
20 MODE 1: BORDER 0: INK 0,0: INK 1,26: INK 2,26: INK 3,26
30 MOVE 320,200: CLS: |SH,0: d=0
40 |RT,5:|FD,d: d=d+1/40: |GP,1+d MOD 3: IF d<18.5 GOTO 40
50 '
60 MOVE 200,10: CLS: |SH,0: a=0
70 |RT,a:|FD,a+5: a=a+1/40:|GP,1+a MOD 3:IF a<18.5 GOTO 70
80 '
90 MOVE 320,200: CLS: |SH,0: n=0: |GP,1
100 a=1
110 |RT,a: |FD,10: a=a+1: IF a<90 GOTO 110
120 MOVE 320,200: n=n+60: |GP,1+(n/60) MOD 3: |SH,n
135 IF n<>360 GOTO 100
130 '
140 MOVE 200,300: CLS: |SH,0: n=0
150 a=1
160 |RT,a: |FD,10: a=a+1: IF a<90 GOTO 160
170 n=n+45: |GP,1+(n/45) MOD 3: |SH,n: IF n<>360 GOTO 150
180 CLG: MOVE 320,200: |SH,0: z1=6: z2=18: z3=2: z4=1
190 d=0: FOR a=-90 TO 270 STEP 5
200 d=d+3: |SH,a: GOSUB 330
210 z4=z4+1: IF z4=4 THEN z4=1
220 NEXT a
230 FOR t=0 TO 100
240 z4=z1: z1=z2: z2=z3: z3=z4
250 INK 1,z1: INK 2,z2: INK 3,z3
260 FOR j=0 TO 6: CALL &BD19: NEXT
270 NEXT t
280 '
290 ' Second run in colour
300 '
310 CLS: INK 1,6: INK 2,18: INK 3,2
320 GOTO 30
330 |GP,z4: FOR square=1 TO 4: |FD,d: |RT,90: NEXT: RETURN
```

Reverse print



Rather than have text appear on screen from left to right, why not have it run Arabic-style from right to left? **Andrew Smith**'s routine does just that. It intercepts anything sent to the screen and displays it starting from the right.

Run the listing once. A message asks for the address where you want to locate the routine. Anything above &4000 (16384) but below HIMEM will do. All text will now appear from the right. To switch this effect off, type CALL &BB4E.

```
1 ' Reverse print
2 ' by Andrew Smith
3 ' Amstrad Action    October 87
10 DATA 2A,D4,BD,22,1B,40,21,0D,40,22,D4,BD,C9,F5
20 DATA E5,CD,69,BB,7A,94,D6,01,E1,94,67,F1,C3,00,00
30 PRINT: INPUT " Please enter start address ";address
40 MEMORY address-1
50 FOR n=address TO address+&1C: READ a$
60 POKE n,VAL("&"+a$): NEXT
70 a$=HEX$(address+&D,4): b$=HEX$(address+&1B,4)
80 POKE address+7,VAL("&"+RIGHT$(a$,2))
90 POKE address+8,VAL("&"+LEFT$(a$,2))
100 POKE address+4,VAL("&"+RIGHT$(b$,2))
110 POKE address+5,VAL("&"+LEFT$(b$,2))
120 CALL address
```

Matrix

This short listing from **Julien Parrott** of Hyde, Cheshire, produces an interesting matrix pattern. It works only on 664 and 6128 machines because it uses Basic's FILL command.

```
1 ' Matrix
2 ' by Julien Parrott
3 ' Amstrad Action    October 87
4 ' CPC 664 & 6128 only
10 MODE 0: INK 0,3: BORDER 3: INK 14,1: INK 15,11: INK 1,3
20 FOR A=1 TO 500
30 IF RND<0.5 THEN PRINT CHR$(200); ELSE PRINT CHR$(201);
40 NEXT
50 MOVE RND*639,RND*399: FILL (RND*13)+2: GOTO 50
```

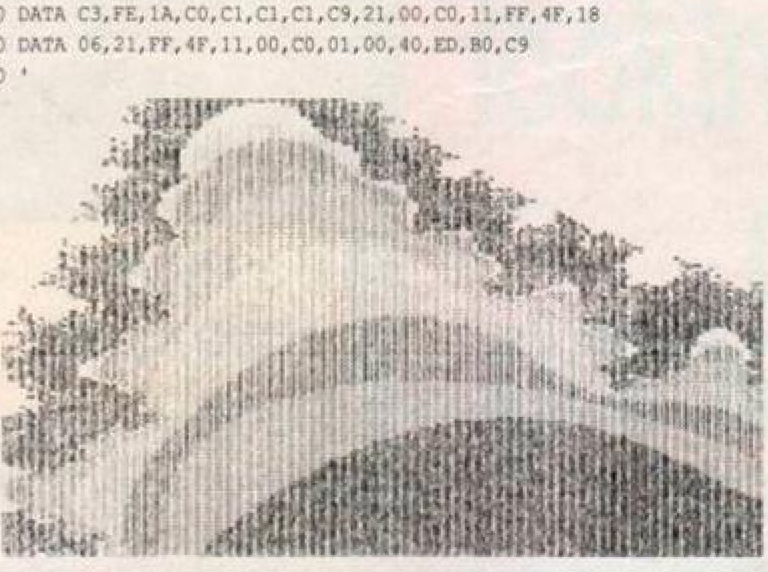
Machine code Mandelbrot

John Muir from Renfrewshire in Scotland, after several weeks hard work, has finished a machine code Mandelbrot generator. The complete set is displayed in just over 40 minutes. Impressive when compared to Alex Clark's Basic version which takes upwards of three hours. John claims this to be the shortest and fastest method of producing the set without having to write lengthy floating-point routines. Type in and run the first listing to display and save (use the filename "Mandset" for the complete set) the full Mandelbrot set.

If you wish to magnify other parts of the set use the second listing. It loads the Mandelbrot picture created by the first listing and allows you to move a box over it. Move the box using the arrow keys and select the area of the set you wish to magnify. Press copy when you are satisfied. This results in several variables and values being displayed. Enter these into line 90 of the first listing. Say you get XM=0.35 YM=0.3 X=22 Y=70, line 90 would then look like: 90 XM=0.35:YM=0.3:X=22:X=70. Once this has been done run the first listing again - the area of the set you chose will be printed.

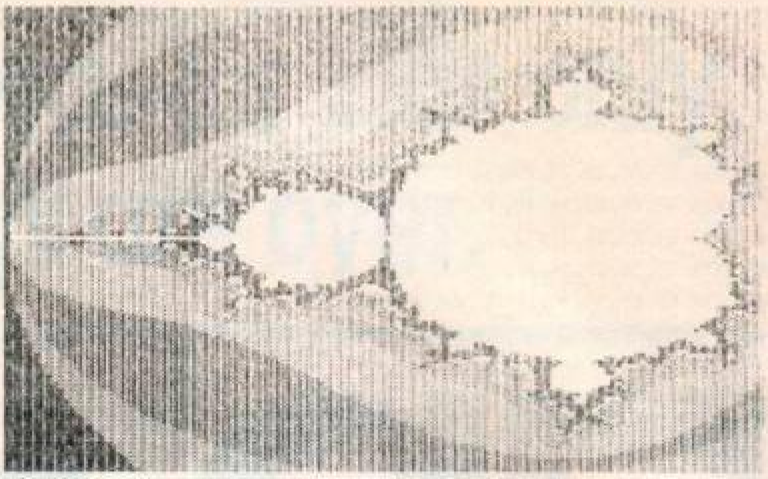
```
1 ' Machine code Mandelbrot
2 ' by John Muir
3 ' Amstrad Action October 87
10 IF PEEK(&4E60)<>&DD THEN GOSUB 170:MEMORY &4E5F
```

```
20 RESTORE 30:FOR A=0 TO 15:READ B:INK A,B:NEXT
30 DATA 0,1,4,2,8,6,15,20,25,24,5,7,17,2,26,0
40 BORDER 0:INK 1,26:MODE 2
50 PRINT"Insert a blank cassette or disk."
60 PRINT:INPUT"Enter filename for picture: ",pic$
70 PRINT"Press a key to save picture once it has drawn"
80 PRINT:PRINT"Press a key to continue...":CALL &BB18
90 XM=2.8:YM=2.4:Y=0:X=0
100 X=X/20:Y=Y/25:TWO=2:FOUR=4:II=XM/161:JJ=YM/201
110 MODE 0:INK 1,1:J=(-1.2+0.3*Y)-JJ:I=(-2+0.35*X)-II
120 CALL &4E60,@TWO,&4FA8:CALL &4E60,@FOUR,&4FAD
130 CALL &4E60,@I,&4FB2:CALL &4E60,@II,&4FB7
140 CALL &4E60,@J,&4FBC:CALL &4E60,@JJ,&4FC1:CALL &4E72
150 CALL &4F94:WHILE INKEY$="":SOUND 7,100:WEND
160 SAVE pic$,b,&C000,&4000:MODE 2:INK 1,26:END
170 RESTORE 200:FOR t=&4E60 TO &4FA7:READ a$
180 nt=VAL("&"+a$):POKE t,nt:chk=chk+nt:NEXT
190 IF chk<>35894 THEN PRINT"DATA ERROR":END
200 DATA DD,56,01,DD,5E,00,DD,66,03,DD,6E,02,01,05,00
210 DATA ED,B0,C9,11,00,00,3C,06,A0,C5,CD,06,B9,ED,53
220 DATA EE,4F,21,B2,4F,11,B7,4F,CD,A2,34,21,BC,4F,11
230 DATA D0,4F,01,05,00,ED,B0,60,68,06,C8,C5,CD,06,B9
240 DATA 22,F0,4F,21,D0,4F,11,C1,4F,CD,A2,34,21,C6,4F
250 DATA 11,D5,4F,01,0A,00,ED,B0,C5,CD,06,B9,21,D5,4F
260 DATA 11,E9,4F,01,05,00,ED,B0,21,E9,4F,11,D5,4F,CD
270 DATA 77,35,21,DA,4F,11,DF,4F,01,05,00,ED,B0,11,DA
280 DATA 4F,CD,77,35,21,D5,4F,11,DA,4F,CD,77,35,11,A8
290 DATA 4F,CD,77,35,11,D0,4F,CD,A2,34,21,E9,4F,11,DA
300 DATA 4F,01,05,00,ED,B0,21,DA,4F,11,DF,4F,CD,9E,34
310 DATA 11,B2,4F,CD,A2,34,21,DF,4F,11,E4,4F,01,05,00
320 DATA ED,B0,11,E9,4F,CD,A2,34,21,AD,4F,11,E4,4F,CD
330 DATA DF,36,C1,04,38,06,78,FE,29,DA,B3,4E,CD,09,BB
340 DATA DC,8D,4F,78,FE,28,D2,75,4F,FE,18,30,3A,FE,13
350 DATA 30,3A,FE,0F,30,3A,FE,0C,30,3A,FE,0B,30,3A,3D
360 DATA CD,DE,BB,ED,5B,EE,4F,2A,F0,4F,CD,EA,BB,C1,2A
370 DATA F0,4F,23,23,05,C2,98,4E,C1,ED,5B,EE,4F,13,13
380 DATA 13,13,05,C2,78,4E,C9,3E,0F,18,D7,3E,0E,18,D3
390 DATA 3E,0D,18,CF,3E,0C,18,CB,3E,0B,18,C7,3E,0A,18
400 DATA C3,FE,1A,C0,C1,C1,C1,C9,21,00,C0,11,FF,4F,18
410 DATA 06,21,FF,4F,11,00,C0,01,00,40,ED,B0,C9
420 '
```



```
430 MODE 2:INPUT"Is the computer a CPC464 (Y/N) ? ",q$
440 IF LOWER$(q$)<>"y" THEN RETURN
450 RESTORE 510:READ T,A,B:POKE T,A:POKE T+1,B
460 FOR S=1 TO 4:READ T:POKE T,A:POKE T+1,B:NEXT
470 READ T,A,B:POKE T,A:POKE T+1,B
480 FOR S=1 TO 3:READ T:POKE T,A:POKE T+1,B:NEXT
490 READ T,A,B:POKE T,A:POKE T+1,B
500 READ T,A,B:POKE T,A:POKE T+1,B:RETURN
510 DATA &4E87,&3F,&33,&4EA6,&4EEF,&4F09,&4F1A
520 DATA &4EC9,&15,&34,&4EDA,&4EE3,&4EE9
530 DATA &4F23,&9A,&35,&4F03,&3B,&33
```

```
1 ' Listing 2
10 RESTORE 25:FOR A=0 TO 15:READ B:INK A,B:NEXT
20 BORDER 0:PEN 1
25 DATA 0,1,4,2,8,6,15,20,25,24,5,7,17,2,26,0
30 MODE 0:LOAD"mandset.bin":xm=0.35:ym=0.3
40 GOSUB 50:MODE 2:INK 1,26:PRINT"XM =";xm;" YM =";ym;
   " X =";x;" Y =";y:END
```



```
50 X=98:Y=90:PRINT CHR$(23);CHR$(1):GOSUB 110
60 GOSUB 110:IF INKEY(0)=0 THEN Y=Y+1 ELSE IF INKEY(1)=0
   THEN X=X+1 ELSE IF INKEY(2)=0 THEN Y=Y-1 ELSE IF
   INKEY(8)=0 THEN X=X-1
70 IF X<0 THEN X=0 ELSE IF X>158 THEN X=158
80 IF Y<0 THEN Y=0 ELSE IF Y>198 THEN Y=198
90 IF INKEY(9)=0 THEN PRINT CHR$(23);CHR$(0):RETURN
100 GOSUB 110:GOTO 60
110 XX=X*4:YY=Y*2:MOVE XX,YY:DRAW XX+80,YY,10
120 DRAW XX+80,YY+50:DRAW XX,YY+50:DRAW XX,YY:RETURN
```

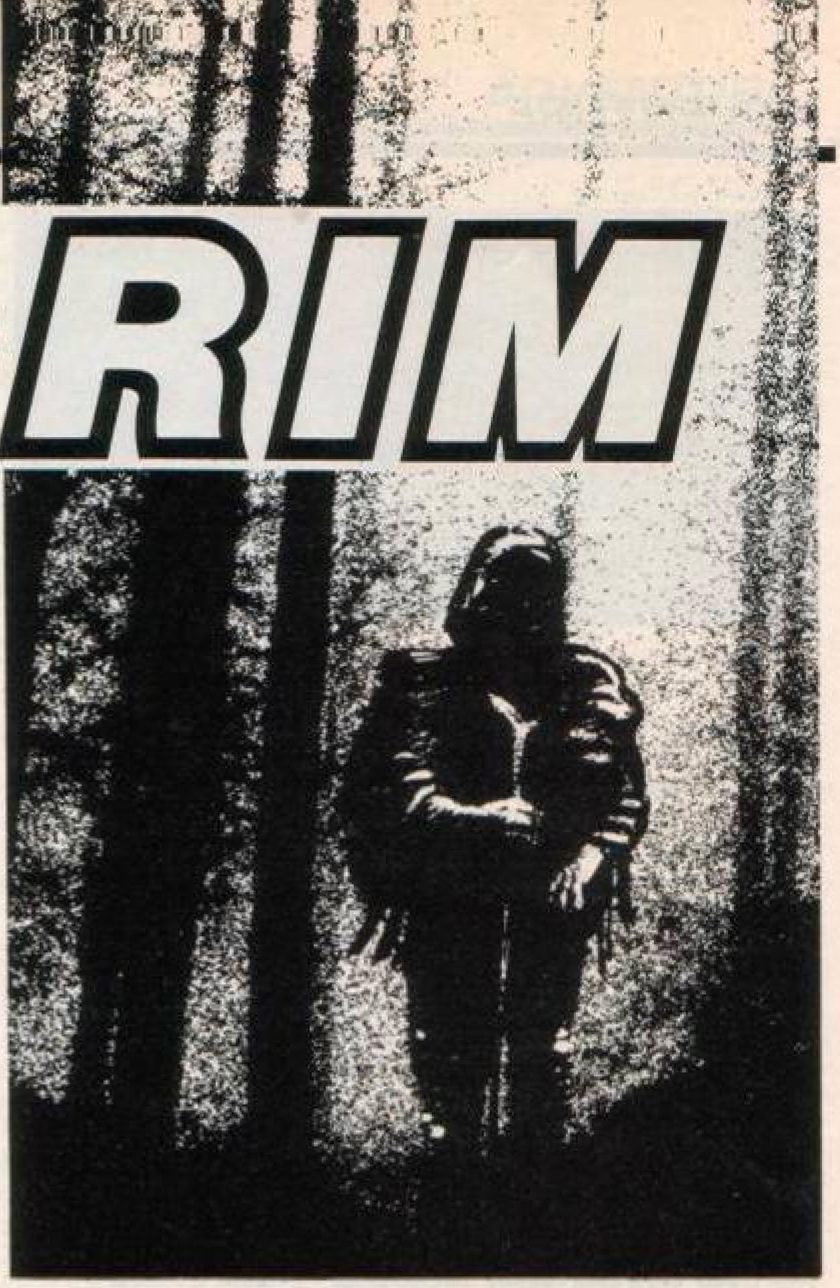
Message scroller

This neat listing from **Daren Vernon** of Harrow scrolls an input message across the screen. The characters are larger than standard and whiz by very smoothly. As it stands, the routine will scroll messages in red on a black background. The colours can be changed by poking &9005 with border colour, &8FD0 with paper colour and &8FD1 with ink colour.

If you want, you can bypass the Mode and colour setup with CALL &901D. Scroller works only in Mode 0.

```
1 ' Message scroller
2 ' by Daren Vernon
3 ' Amstrad Action    October 87
10 ' *Data for machine-code*
15 DATA 00,06,55,FF,FF,AA,55,55,AA,AA,00,55,AA,00,00,FF,6FF
20 DATA FF,AA,00,55,AA,FF,00,55,AA,55,AA,55,AA,55,AA,55,7F8
25 DATA AA,55,AA,55,AA,FF,00,FF,FF,AA,00,00,00,00,00,00,64F
30 DATA AF,CD,0E,BC,01,00,00,CD,38,BC,AF,21,D0,8F,E5,F5,811
35 DATA 4E,41,CD,32,BC,F1,E1,23,3C,FE,10,20,F1,21,A2,90,7ED
40 DATA 22,9D,90,3E,03,32,9F,90,CD,19,BD,CD,3C,90,3E,2F,69A
45 DATA CD,1B,BB,30,F3,AF,CD,0E,BC,C9,62,42,3A,9F,90,3C,81E
50 DATA E6,03,32,9F,90,20,1E,2A,9D,90,7E,23,FE,FF,20,05,6A2
55 DATA 21,A2,90,7E,23,22,9D,90,CD,A5,BB,11,DF,8F,ED,53,82F
60 DATA A0,90,CD,53,BC,21,50,C5,ED,5B,A0,90,13,ED,53,A0,8AD
65 DATA 90,1B,01,08,03,C5,1A,E6,C0,D5,C5,E5,5D,54,23,01,690
70 DATA 4F,00,ED,B0,12,E1,C1,7C,C6,08,67,30,04,11,50,C0,6A6
75 DATA 19,D1,10,E2,13,13,13,13,C1,0D,20,D9,C9,B7,90,03,602
80 DATA E3,8F,20,20,20,48,6F,77,27,73,20,61,62,6F,75,74,5D5
85 DATA 20,74,68,69,73,20,66,6F,72,20,61,20,6E,65,61,74,588
90 DATA 20,73,63,72,6F,6C,6C,69,6E,67,20,6D,65,73,73,61,626
95 DATA 67,65,2C,20,65,68,20,3F,20,20,20,20,20,20,20,FF,423
100 ' *Poke in machine-code*
110 h=HIMEM
120 addr=&8FD0: MEMORY addr-1: FOR x=0 TO 16: FOR y=1 TO 16
130 READ byte$: byte=VAL("&"+byte$): POKE addr,byte
150 addr=addr+1: checksum=checksum+byte: NEXT
160 READ chk$: chk=VAL("&"+chk$)
170 IF checksum<>chk THEN PRINT"Data error in line";
    15+5*x: END
180 checksum=0: NEXT
190 ' *Input message*
200 INPUT "Message to scroll ";message$
210 IF message$="" THEN GOTO 250
220 FOR x=1 TO LEN(message$): byte=ASC(MID$(message$,x,1))
230 POKE &90A2+x,byte: NEXT:POKE &90A2+LEN(message$)+1,&FF
240 ' *CALL machine-code scroll*
250 CALL &9000
```

THE PILGRIM



Fancy getting your game published? The Pilg checks out a couple of readers' games and spills the beans about how best to get your game onto the shelves. PLUS part seven of the Pilg Programming series, news of a new Level 9 compilation from Rainbird, mail, tips, and the legendary Lords and Ladies of Adventure.

Every month the Pilg receives a number of readers' games created using GAC and the Quill. Until very recently there was little chance of seeing these games on the shelves, but now all this is changing.

First, the budget software market has generated an enormous demand for product. Many readers will have played games created using GAC or the Quill that have been released by Americana (Spy Trek), Firebird (SubSunk) and others. Some of these games have even made it into the full-price market, in particular the programs created by Fergus McNeill of Boggit and Robin of Sherlock fame.

Secondly, there is a new budget label, Automata, being set up by Interceptor to produce budget adventure product. It is launching with nine GAC titles and the company are always looking for new product. Those with longer memories may well remember the old Automata company, who produced the infamous Pi-Man games. Interceptor have bought the rights to the company name and its products, so if you fancy seeing your game on the market with the notoriously nasal, beer-gutted figure reclining on the cassette label, now's your chance!

BUT...before you rush off and thrust your latest offering into the mail box, there is a lot you can do to increase your chances of getting your game into the shops. To help you, we'll look at a couple of games that the Pilg has recently received and see how they shape up in presentation and content.

The Magic Cottage

Stuart Lockey, Weybridge

The Magic Cottage is a game based on the book of the same name by James Herbert. The first point to make here is that **you should not submit a game for publication that is drawn on the work of another author.** In the case of previously published books, films, plays or whatever this is particularly important. In most cases, not only permission but also payment (sometimes very substantial) is required before you can use another plot or design.

Stuart's game runs on the 6128 only and uses a silicon disk (if you have one). The program asks whether such a disk is fitted when you RUN it and if you answer NO you receive a prompt asking you to edit a line of the program to enable it to run correctly. This is a serious mistake – **in order to play a game the user should have to do nothing except RUN the program.** You should avoid any disk or tape swapping, loading of different files, or unclear loading instructions.

In addition, Stuart's decision to use the 6128 is unwise. As far as the Amstrad market is concerned, the 6128 is in a minority. **The best format for an Amstrad adventure is cassette format, 464 and 6128 compatibility, with any evaluation copies supplied on disk.** This is a sad fact, since a disk-only game opens up a lot of very attractive possibilities, but I'm afraid that until we've all bought disk drives we'll have to live with it.

The instructions for Stuart's game are contained in his accompanying letter. Another blunder, I'm afraid! **The disk supplied should have a label bearing a clear loading instruction, the name of the game, a copyright notice (e.g. COPYRIGHT STUART LOCKEY 1987), and your name and address.** Most important! Don't forget also that if you have used a utility, you should credit the company concerned as in COPYRIGHT BERT BALROGER 1987, PRODUCED USING GAC FROM INCENTIVE SOFTWARE.

In addition, you should also **include a disk or cassette label carrying in as few words as possible a clear summary of the game's objective.** Again, this is extremely important. You'd be amazed at the number of games received that carry no explanation or introduction to set the scene of the game. Ideally, you should also program such an introduction into the beginning of the adventure, with an option to skip it if not required.

Your letter accompanying the game should be on one sheet of paper only, unless you feel that there is vital information which simply cannot be compressed into that space. It should be typed or printed out – if you have to hand-write it, make sure your writing is legible. The letter should contain basic information about the programmer and the adventure, together with your reasons for thinking that the game is suitable for public release. I.E. What's so good about it? Be confident – don't say "I think the game is good because...", but strike out boldy and say "The game is good because...".

Ideally, the first sentence of your letter should read 'Further to our recent telephone conversation, I enclose...'. And that obviously means that you have to make the effort to (a) find out who will be receiving and playing your game and (b) phone them to make sure they wish to receive an unsolicited program. This is only courteous, and also has the desirable effect of fixing your name in the publisher's mind. Don't, however, be a pest on the 'phone and allow at least six weeks for a response to your contribution. Then follow up your application with a letter. Most importantly, you should **keep a back-up copy of the program you send and not expect to have the disk or tape returned to you.**

And now for the game itself. Stuart's game does not appear to have been written using either GAC or the Quill, which is a brave step and has the advantage of giving the game a very individual flavour. It's also risky, since **most companies will prefer a game that can be released on more than one format.** Both utilities give you the possibility of doing this with a little extra work.

As you can see from the screenshot, Stuart's game has some excellent screens, but it does unfortunately include a number of spelling mistakes and programming glitches. In addition the vocabulary is limited and in some cases the gameplay is poorly thought out. For example, one location starts with two glasses in it, each of which has a different description when examined but the same description when you enter the room. "You can see glass, glass," is a bit confusing under the circumstances and typical of the sort of rough edge in a program that could put off a software house. Note that not only is the name of the object non-unique, but also



An attractive screen from Stuart Lockey's Magic Cottage.

that the object list ends in a comma (in case there's another one to follow). Little points like this need to be tidied up before sending the game off.

As a general rule, **the person who programs a game is the worst person to play-test it.** This may sound illogical, but the fact is that when working on a game you soon train yourself (unconsciously) to ignore many of its minor faults – and sometimes the major ones as well – and this is hardly going to endear your adventure to the player.

Good points about Stuart's game, however, are the graphics which are excellent and original. Pictures, if included in a game, must justify their presence. Don't use a graphics facility in your utility just because it's there – make it enhance the program and put as much effort as you can into it. If you're not skilled enough then better to go for very simple pictures or even none at all.

The Magic Cottage isn't a bad attempt by any means, but as you can see it has brought up a number of points that players submitting products to software houses would do well to bear in mind.

The Last Believer

Paul Lucas, Goat Man Games, 79 Leaf Lane, Coventry, CV3 5AS

Here's a good lesson on how to submit a game for consideration. The disk comes with an informative label, giving the name of the game, loading instructions, and the message "For more information about this game type RUN "START and press RETURN". The accompanying letter is short and precise, giving both the game and the programmer an efficient image.

Furthermore, there's a comprehensive hint sheet with game. This is a great bonus and **you should always include a hint sheet or solution together with some general information about gameplay.** I'm afraid that just because you may have spent six months writing a game doesn't mean that the evaluator is going to spend six months playing it. You'll be lucky, frankly, if they spend six minutes on it.

This may sound grossly unfair, and you may claim that no-one can evaluate your masterpiece without playing it for at least a century. The fact is, however, that any game worth its salt immediately proclaims that fact from the very first screen. If that first six minutes doesn't get the evaluator excited enough to carry on playing then he (or she) is going to load something else.

Paul Lucas' game does grab attention from screen one by having a very attractive redesigned character set, tidy and professional text-layout, and clear, well-written location descriptions. Even without graphics the program keeps the player involved long enough for the plot to cast its spell over you. The story is a simple one (most good ideas are) and in the traditional mould of magic and evil-deeds, as you attempt to sve your village from the spell of a black magician.

Paul's decision to make the game text-only is a brave one, but he does his best to make up for it with the new character set and a number of useful commands including RAMSAVE, TAKE ALL and other syntax goodies. The puzzles are well thought out and quite challenging, though you shouldn't find casual exploration a problem. You can get a copy from the address above for £4.99. The Pilg thinks this a bit steep for a homebrew game, since there are some excellent games around for £2.99 these days, but if you've got a fiver to spend you'll get a good lesson in how to present your programs for evaluation, and the game isn't bad either!

However, you need to think very carefully about text-only games. They really do need to have a very high standard of programming and authorship to stand a chance these days. Steer clear of them unless you're absolutely sure you've got what it takes.

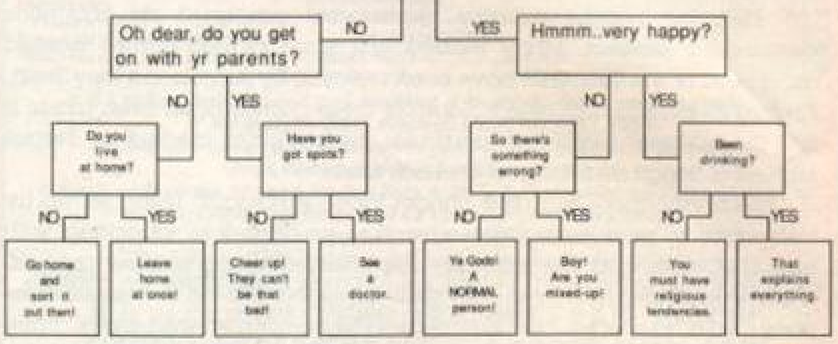
Now all you've got to do is check out the box on where to send your games, and keep your fingers crossed!

Programming with the Pilg...

PART 7 The Pilg holds his breath as he succeeds in squeezing in yet another instalment of the programming series and prepares for next month's start on the listing itself.

OK, you simply don't believe it! You simply cannot believe that the Pilg's proggy course is back on the rails after so many issues in which we've had to cut back through lack of space. Well, here we are with part seven, and next month we have a guarantee that part eight will squeeze in, together with the first of the game listings.

First, however, we owe you an apology. Last month's piece dealt with our method of decision-making using "decision trees", but unfortunately a diagram of the tree in question was left out. Here it is:



As we've already described, the decision tree process involves moving down through the tree, checking a condition at each "node" and using the value of the conditional statement (i.e. TRUE or FALSE, which evaluate to -1 or 0 respectively on the Amstrad range) to determine which node to move to next. Once the program reaches the bottom of the tree, it takes the appropriate action. To see a simple programmed example of the technique and the explanation of how it works, see last month's issue.

The advantage of using decision trees doesn't just lie in space saving and tidy programming. It can also help you to plan your adventure. You'll find that the process of constructing a fool-proof tree for, for example, the GET command, is not all that easy, but it can be quite an enjoyable process and, best of all, provides a visual way of tackling logic problems within your game.

Trees don't have to simple "binary" ones like the one above. That is to say, each node does not have to have either two "children" or none at all. You can have trees with irregular structures where the nodes have varying numbers of offspring. These are more tricky to program, but we'll be looking at them later in the series.

Every time something happens in your game, you'll find it necessary to store the results of the action somewhere in the program. For example, suppose the player picks up an object, that object's status will have to be reset to indicate that it is now "carried". We'll be doing this by setting up a whole series of "flags", each with its own explanatory name (such as OBJ-DROPPED). The flags are all stored in one section of the program and updated when necessary.

This group of flags will provide us with a set of information about the game that can then be incorporated into the different tree structures to serve as conditions which will determine the route the program takes from node to node.

To make all this clear, and to summarise all the points we've made so far, next month's article kicks off with a mini-adventure that:

- shows how location descriptions, object data etc are stored;

- shows how tree structures and flags can be combined efficiently to decide which responses the program should make to your commands.

You'll find it very easy to understand, and having whetted your teeth on that you'll be able to tackle the larger game without difficulty. In particular, if you've found that you've missed parts of the series, next month will give you a chance to catch up and consolidate the various subjects we've tackled.

Lords and Ladies of Adventure

This month's Lords and Ladies are ready and waiting to solve problems great and small, sent in by distressed Pilgs. Dally not in the Dragon's dungeon, fellow wanderers, but seize pen and paper, hail the scaley beast, and request that it deliver your missive to one of the following addresses.

Alternatively, thou mayest use the telephone – but not before 9.00am in the morning or after 10.00pm at night, on peril of thy most painful demise at the talons of the Pilg's trained Balrogge.

Message from Andromeda, Seabase Delta, Knight Tyme, Spellbound, Robin of Sherwood, Imagination, Heroes of Karn, The Fourth Protocol, Wild Bunch, Forest at Worlds End, Questprobe III
Russell Cooper, 12 Butlers Close, 52 Butlers Road, Handsworth Wood, Birmingham, B20 2PA.

Subsunk, Knight Tyme, Spytrek, Souls of Darkon, The Experience, Heroes of Karn, Kobyashi Naru
Robert Squires, 52 Broke Walk, Regents Estate, Hackney, London, E8 4SJ

Warlord, Keroes of Karn, Never Ending Story, Red Moon, Ship of Doom, Questprobe, Mordens Quest, Knight Tyme, Very Big Cave Adventure, Doomdarks Revenge, Boggit, Kobyashi Naru, Kentilla, Hobbit, Colossal Cave Adventure
Paul & Timothy Stitt, Site 101 Beaufort Heights, Beechill Road, Newtownbreda, Belfast BT8, N. Ireland. Tel: 0232 691603

Price of Magik, Worm In Paradise, Forest at the Worlds End, Heroes of Karn, Shogun, Knight Tyme, Colour of Magik, Spellbound
Iain Atlantic, 3 Alexandra Road, Morecambe, Lancs, LA3 1TH

Boggit, Imagination, Subsunk, Seabase Delta, Aftershock, Wild Bunch, The Sydney Affair
Christopher Muff, 49 Renway Road, Broom Valley, Rotherham, S Yorks, S60 3EU

Message from Andromedam Spytrek, Subsunk, Seabase Delta, Vera Cruz, Imagination, Forest at Worlds End
Mark Griffiths, 327 Tarbock Road, Huyton, Merseyside, L36 0SD

Adventure Quest, Aftershock, Angelique a Grief Endcounter, Arnold Blackwood Trilogy, Big Sleaze, Boggit, Bugsy, Castle Blackstar, Cursed by the City, Dracula, Dungeons Ameth. Alchem. + Everything, Enchanter, Escape from Khoshima, Espionage Island, Fantasia Diamond, Gremlins, The Hermitage, Heroes of Karn, Hunchback, Imagination, Inca Curse, Jewels of Babylon, Forest at Worlds End, Kobyashi Naru, Lords of Time, Mansion, Message from Andromeda, Monsters of Murdac, Mordens Quest, Never Ending Story, Nythyhel, Pawn, Planet of Death, Rebel Planet, Robin of Sherwood, Robocide, Sorcerer, Souls of Darkon, Spellbreaker, Subsunk, Seabase Delta, Spytrek, Theseus, Very Big Cave Advnture, Warlord.
G L Wheeler, 2 Burford close, Southdown, Bath, Avon,' BA2 1JF Tel: (0225) 26919 (between 10am and 12 midnight only)

Heroes of Karn, Warlord, Rebel Planet, Mindshadow, Seabase Delta, Erik the Viking, Knight Tyme, Message from Andromeda, Hobbit, Gremlins, D.A.A.'n' Everything
Gavin Smith, 28 South West Avenue, Bollington, Macclesfield, Cheshire, SK10 5DS Tel: (0625) 73532.

Gems of Stradus, Forest at Worlds End, Jewels of Babylon, Message from Andromeda, Warlord, Red Moon, Snowball, Dungeon Adventure, Adventure Quest, Hobbit, Necris Dome, Souls of Darkon, Lords of Time, Theseus, Robin of Sherlock, Bugsy, Mordons Quest, Questprobe III, Very Big Cave Adventure, Boggit, Dodgy Geezers, Aftershock, Redhawk, Sorcerer, Hitchhikers Guide, Nythyhel, Brawn Free, Arnold Blackwood Trilogy, Fantasia Diamond, Espionage Island, Mindshadow, Inca Curse, Bored of the Rings, Emerald Isle, Heroes of Karn, Spytrek, Subsunk, Hunchback, Seabase Delta, Never Ending Story, Knight Tyme, Kentilla, Apache Gold, Escape from Khoshima, Circus, Sphinx Adventure, Woodbury End, Imagination, Stolen Lamp, Gremlins, Classic Adventure, Seas of Blood, Dungeons Ameth. Alchem. + Everything, Beer Hunter, Lord of the Rings, Zork 1, Dracula, Colossal Adventure, Tomb of Kuslak, The Mural.
Darren Stephens, 65 Crown Road, Milton Regis, Sittingbourne, Kent, ME10 2AH Tel (0795) 73490

Snowball, Spellbound, Mission 1, Heroes of Karn, forest at Worlds End, Message from Andromeda, Jewels of Babylon, Knight Tyme, Spellbound, The Boggit, Bored of the Rings, Subsunk, Hobbit, Trapdoor, Mordon's Quest, Espionage Island, Mindshadow, Fantasia Diamond
Iain Purdie, 56 Lyndhurst Grove, Low Fell, Gateshead, Tyne and Wear, NE9 6AX Tel: (091) 487 5788

Pilgrim Post

Graphic Protest

'First I must congratulate you for a very well presented humorous and informative adventure column. You appear to be far ahead of your adventure column rivals, especially on style. *(Thank you, Richard, your family size tin of Tuna Chunks is in the post – Pilg).*

Secondly, I would like to comment on adventure graphics. It is my belief that these are unnecessary in a game and can even detract from the adventure. I was driven to tears by *Warlord* because the graphics took so long to draw and I feel that the memory given to these graphics, however small or large, should make way for larger text descriptions and better interaction. I find it a continuous pain to be told 'You can't do that' and most graphics do nothing to enhance the gameplay.

Thirdly, I am starting a Play-By-Mail adventure with several others and I would be honoured if you would print my address so that other adventurers can feel the freedom of such an adventure (much cheaper than an Infocom game) and write to me for details (enclosing a stamp).

Finally, although I have survived many great ordeals, I must share with you a couple of strange experiences that you might find amusing...

Dungeons, Amethysts, Alchemists, and Everything ... giving the bull whip to a novice produces a peculiar song - try it!

Lord of the Rings - I sent Pippin alone to explore and map and what was the result? He ended up killing six black riders and six horses!

Star Wreck – if you try to get Zulu to do anything, he starts taking his clothes off.'

Richard Pratt, Ramsgate

There was a time when adventure columns were full to the brim with letters, features, and lengthy columns debating the question of graphics. It's significant, thinks the Pilg, that this is no longer the case.

The fact is that when graphics were first introduced, in games like *Knights Quest* and the *Hobbit*, they had a tremendous impact on the adventure market. Suddenly software houses saw the commercial possibilities of putting piccies in with the prose and everyone fell over themselves in an effort to outdo their competitors.

As a result we got games like *Twin Kingdom Valley* from BugByte, which had no less than 175 full screen pictures, including some animated sequences. Remember that this was in the days when very few games had more than 100 text-only locations – to have 175 PLUS piccies was quite extraordinary and the game did very well as result.

Interceptor went the other way – fewer pictures but very high quality. Their game *Heroes of Karn* caused a stir when it appeared on the C64 because not only were the graphics quite astonishing for the time, but the game also featured music, which changed according to the location you were in. A little later Level 9 – champions of the text adventure – included graphics in their game *Emerald Isle*. At that time, it seemed, the text-only adventure was dead. *Mordon's Quest* was the only significant release that dared to do without graphics – although *Castle Blackstar* made a brave attempt, though sadly it was never given the marketing support it deserved (for it's a very good game).

Nowadays, however, we've grown accustomed to seeing a pretty (or not so pretty) face on our games. Graphics have improved tremendously in quality, as have the compression techniques to squeeze them in alongside the text. The final result has been a steady release of games that use graphics to boost atmosphere, rather than to accompany each and every location. All the latest adventures use this approach, including Level 9's *Knight Orc*, and the Pilg thoroughly endorses the practise.

All of which sounds, Richard, as if I'm disagreeing with you. But I'm

not – because if you think about it, your complaint (along with the many others I used receive on similar lines) is nothing to do with pictures, it's to do with what programmers do with pictures. And once we all change over to disk-drive adventuring, where new location descriptions or screen images can be loaded in from disk when needed, the whole problem of choosing between text and graphics will no longer arise. Support the adventure movement – buy a disk drive!

The Pilgrim Graciously Admits Defeat...

'I recently borrowed a copy of *Dungeons, Amethysts, Alchem..etc* and after loading it up, I completed it in half an hour!

Now I know that it might be a budget game, but it is much too easy to even justify £1.99. This also beats your record of solving an adventure the quickest.'

Gavin Smith of Macclesfield

The end of an era. The Pilg is not one to get bad-tempered when he is thrust into second place. By the way, Gavin, a small packet is on its way to you – you can't miss it – it's about forty foot long and growls when you go near it. It's a fun prize which you can feed when you've unwrapped it. (Note to Bob Wade – send parcel to G.Smith, don't forget to write BALROG - HANDLE WITH CARE on it - we don't want to lose another postman, do we?).

Actually, dear readers, Gavin isn't the only one who finished this game in double time. Mr Townsend of Huncoat reckons it took him longer to load the adventure than it did to solve it! And Graham Wheeler also claims to have finished it in thirty minutes. OK, so it IS simple, but the Pilg still got a few laughs out of it and these days that's worth paying for in my opinion. However, the general consensus of readers seems to go against me on this one – so avoid *D.A.A.n'Everything* if you don't want things too easy.

Up and Coming...

'...My thanks for reviewing my two games, *Sharpes Deeds* and *Black Fountain* , however I was a bit disappointed that you didn't rate them higher than you did and am writing to clarify a few points.

Firstly, *Black Fountain* - part one was intended to be a 'stroll around' so that even novice and junior players (at whom the game is aimed, a fact which unfortunately Incentive seem to have failed to pass on) would be able to enter the harder, second part...

Other points that I feel could have been mentioned: the fact that it is a two-part game; the humour (did you kiss the girls in the backroom of the Inn, or Isharina? or try to remove the tunic?); the EXAM ME command; the ravine and monster problems (both I believe are new answers to old puzzles); the difficulty (including solving a riddle) of obtaining the pure crystal, which is needed to complete the game. Also that the graphics in Part Two are an improvement on Part One?...

However I do agree about the limted text – both the originals were inteded to be much more descriptive, but unfortunately the hungry GAC put paid to that idea! Concerning the price, I did push Incentive for a lower one – when the games were accepted by them I had no idea how much they would be sold at. Perhaps if they'd been relesed on a budget label your review would have been better?'

Linda Wright, Bristol

Fair comment, Linda. The Pilg looks forward to seeing more stuff from you, and, yes, I'm afraid the games would have got a higher rating if the price had been lower. This raises a point for all would-be software authors – make sure you fully understand what marketing plans companies have for your games, for they are YOUR games. You don't see Jeffrey Archer books in the shops for £15.00, and if you did, they wouldn't sell and Mr Archer would be looking for another publisher.

Clue Sniffing with the Pilgrim

This month's aromatic collection comes from Gavin Smith, Graham Wheeler, Philip and Paul Robson, Philip Howard, Robert Squires, and Iain Purdie.

Dungeons, Amethysts, Alchemists, and Everything

Don't swim in the nude
Give whip to nun then get wrench
Give wrench to man in bed to get ladder
Use ladder to get in small building
The key to the door is in the vase – drop vase to get it
The vase is in the cupboard, use tiny key to get it
Don't go in to nothing
Kill dragon with sword

Spellbreaker

The zipper – this contains a scroll. Get zipper, open zipper, reach inside hole, empty zipper, get scroll (with girgol spell on it). Don't drop the zipper as it is useful for carrying things in and it is essential near the end of the game.
To get the cube from the idol's mouth, learn malyon, learn espnis (several times), malyon idol, espnis idol – this may need to be done several times as spells are unreliable and the espnis spell needs to work not the first but the second input after the malyon spell, so that when the idol returns to a statue it has its mouth open in a yawn.

Shadows of Mordor

To get down cliff in first section: roll round rock east, push rock over cliff, cut tree with sword, get branch, go N,S, lever (lumpy) rock N then E, tie rope to rock, climb down rope, pull rope, tie rope to (round) rock, climb down rope, pull rope, go E,then SE.

Imagination

To pass the japanese soldier, paint your card
To get the coals, wear gloves and carry a bucket
To get the creamy icicle, give cow grass, then milk the cow

Spy Trek

Getting pole for gondola, chop the goal
Heal the pilot's eyesight with a peeled onion.

Mission 1

To use the lift on the first floor, ask robot to help

Forest at Worlds End

Blow in the dragon's ear and he may get horny

Bored of the Rings

To kill the Nazel on the C5, fire gun

Mordon's Quest

To win in the arena, first travel to the future zone, get the geiger counter, travel back to the Roman era, go to the barn and examine the hay. Get the battery and travel back to the future. Go to the freezer chamber and thence to the robot. Insert battery, then go to the second door to the south, touch the plate, and go S. Now press the buttons in this order:- 3,1,2,2,4,1. Go to the reactor room door and touch the plate. Go south until you reach the lift. Touch the plate and enter the lift. Touch the plate and then go N, NW, NW and get the cigar. Find your way back to the time machine and the Roman era. Go N,N,N,N,N,N,N, and take the sword and shield. Now smoke the cigar and go S,S,S,W,W,N,NE to reach the minotaur.

Espionage Island

To move the rock (the instructions aren't very clear) you must have the rope. First, type TIE ROPE then TO ROCK. Now press the button and then press the pedal.

Questprobe III

To avoid getting shot by the death ray you must be Torch and light tar.

Contacting the Pilg

The Pilg welcomes correspondence on all aspects of adventuring and will always do his best to fit your missives onto these pages. You can get in touch with Pilgy by writing to him c/o Amstrad Action, Future Publishing, 4 Queen Street, BATH, Avon, BA1 1EJ. Alternatively, if you have a modem, you can contact the man with the rod and staff on BT Gold, mailbox address 83:JNL251.

AA small ads

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CPC 6128 Business software: Accounts, Stock Control, Mailing List, Label Printer etc. All for £24.95. also invoicing only £14.95 cheques, PO's or SAE for details. SD Microsystem (AA) PO BOX 24, Hitchin, Herts.

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Sick joke tape. Its not a game, just good clean fun £2. Postage and packing included. Cheque or PO with order to Knowles, 102 Standhill Cres, Barnsley, South Yorkshire S71 1SS

***Mahjong* stock clearance.** AA rating 70%, September 1986. Full instructions £1.50 inc p&p while stocks lasts. Cheque or PO to Liftsoft, 52 Garretts Green Lane, Yardley, Birmingham B26 2HP

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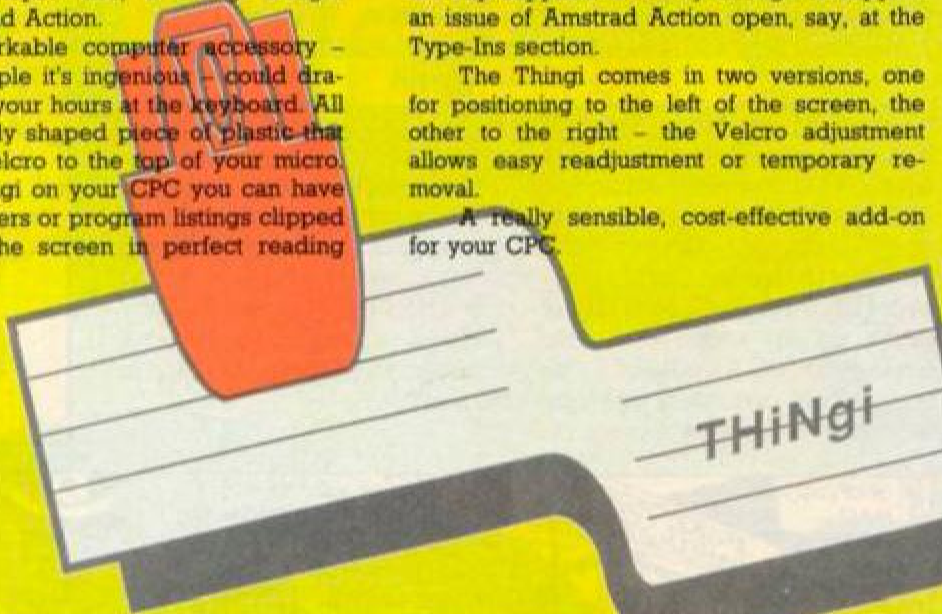
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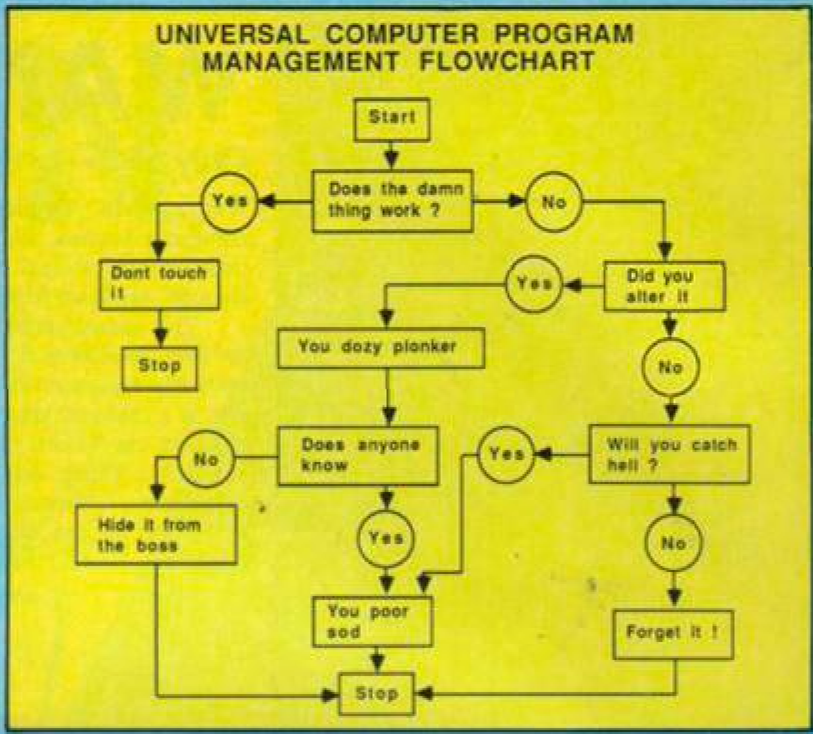
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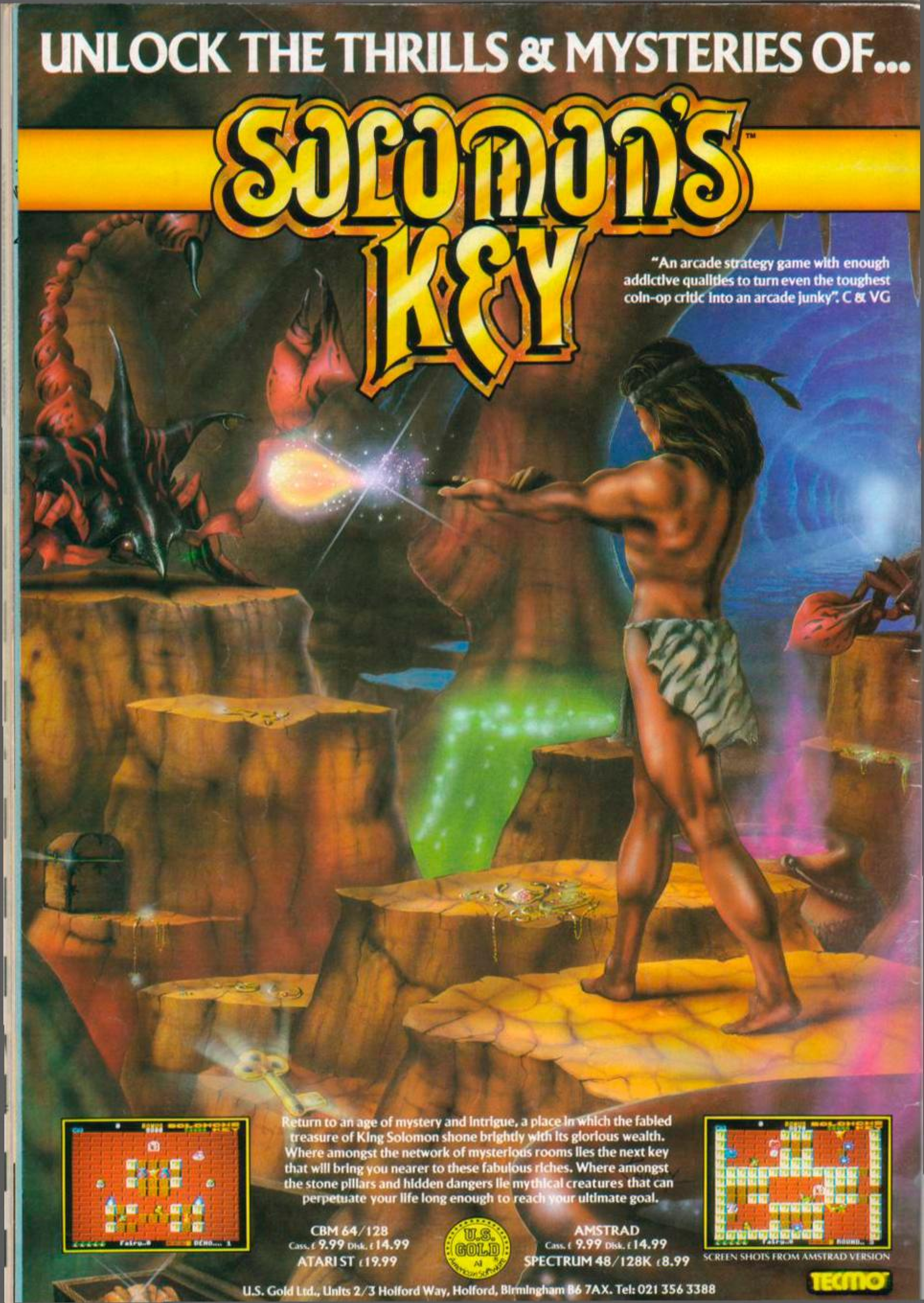


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